

Graduate Catalog 1984-85
Ohio University Bulletin



June 1984

Academic Calendar, 1984-85

The student should obtain from his or her dean's office a detailed list of deadlines for the quarter in which the graduate degree is expected to be received.

Fall Quarter, 1984

Aug. 15, <i>Wed.</i>	Deadline for 1st fall-quarter payment on Monthly Payment Plan.
Sept. 8, <i>Sat.</i>	Registration day.
Sept. 10, <i>Mon.</i>	Classes begin.
Sept. 14, <i>Fri.</i>	Deadline for 2nd fall-quarter payment on Monthly Payment Plan.
Sept. 26, <i>Wed.</i>	Last day for filing application and paying fee for conferral of degree on November 21.
Oct. 15, <i>Fri.</i>	Deadline for 3rd fall-quarter payment on Monthly Payment Plan.
Nov. 12, <i>Mon.</i>	Veterans Day (offices closed; classes in session).
Nov. 15, <i>Thurs.</i>	Deadline for 1st winter-quarter payment on Monthly Payment Plan.
Nov. 15, <i>Thurs.</i>	Reading day.
Nov. 16, <i>Fri.</i>	Examinations begin.
Nov. 21, <i>Wed.</i>	Quarter closing date.
Dec. 14, <i>Fri.</i>	Deadline for 2nd winter-quarter payment on Monthly Payment Plan.

Winter Quarter, 1985

Jan. 7, <i>Mon.</i>	Registration day.
Jan. 8, <i>Tues.</i>	Classes begin.
Jan. 15, <i>Tues.</i>	Deadline for 3rd winter-quarter payment on Monthly Payment Plan.
Jan. 15, <i>Tues.</i>	Martin Luther King Day (offices open; classes <i>not</i> in session).
Jan. 23, <i>Wed.</i>	Last day for filing application and paying fee for conferral of degree on March 23.
Feb. 15, <i>Fri.</i>	Deadline for 1st spring-quarter payment on Monthly Payment Plan.
Mar. 15, <i>Fri.</i>	Deadline for 2nd spring-quarter payment on Monthly Payment Plan.
Mar. 18, <i>Mon.</i>	Examinations begin.
Mar. 23, <i>Sat.</i>	Quarter closing date.

Spring Quarter, 1985

April 1, <i>Mon.</i>	Registration day.
April 2, <i>Tues.</i>	Classes begin.
April 15, <i>Mon.</i>	Deadline for 3rd spring-quarter payment on Monthly Payment Plan.
April 17, <i>Wed.</i>	Last day for filing application and paying fee for conferral of degree on June 15.
May 30, <i>Thurs.</i>	Memorial Day (offices closed; no classes).
June 10, <i>Mon.</i>	Examinations begin.
June 15, <i>Sat.</i>	Quarter closing day; annual commencement.

Summer Quarter, 1985

First Term

June 17, <i>Mon.</i>	Registration day; classes begin.
June 20, <i>Thurs.</i>	1st-term students should apply and pay fee for conferral of degree on August 24.
July 4, <i>Thurs.</i>	Independence Day (offices closed; no classes).
July 19, <i>Fri.</i>	Examinations.
July 20, <i>Sat.</i>	Term closing date.

Second Term

July 22, <i>Mon.</i>	Registration day; classes begin.
July 25, <i>Thurs.</i>	Last day for filing application and paying fee for conferral of degree on August 24.
Aug. 23, <i>Fri.</i>	Last day of classes; examinations.
Aug. 24, <i>Sat.</i>	Quarter closing date.

Schedule of Academic Fees* (per quarter)

Hours	Resident of Ohio	Nonresident
1	\$ 87	\$ 167
2	174	334
3	261	501
4	348	668
5	435	835
6	522	1,002
7	609	1,169
8	696	1,336
9-18	705	1,352
Extra hours ...	52	99

Auditors pay fees in full as above.

*Effective Summer Quarter, 1984. Fees subject to change without notice at the discretion of Ohio University.

Graduate Council

Ron Cappelletti (1984)
Arts and Sciences
 John Collier (1985) — Chair
Engineering and Technology
 Ron Downey (1984)
Arts and Sciences
 Donald Fucci (1986)
Health and Human Services
 Charles Higgins (1985)
Health and Human Services
 Drew McDaniel (1984)
Communication
 Danny Moates (1985)
Arts and Sciences
 Jane Myers (1986)
Education
 Kahandas Nandola (1986)
Business Administration
 Gar Rothwell (1986)
Arts and Sciences
 George Weckman (1985)
Arts and Sciences
 Lynden Williams (1985)
Arts and Sciences
 Bob Winters (1985)
Fine Arts
 Ronald E. Barr
Administration
 Richard Koshel
Associate Deans' Council
 Ragy Mitias
Associate Deans' Council

Four graduate students also serve on the Graduate Council.

A graduate student must be registered in any quarter in which he or she is receiving any service from the University or using its facilities. A master's degree student must be registered for at least one graduate credit hour and a doctoral student for at least two graduate hours.

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Graduate Catalog

Ohio University Bulletin

Contents	Academic Calendar	<i>Inside front cover</i>
	University Administration	<i>Inside front and back covers</i>
	General Information	3
	Application and Admission	9
	General Regulations and Procedures	11
	University Fees	13
	Financial Support	15
	Degree Requirements	17
	Graduate Programs	20
	Courses of Instruction	21
	Afro-American Studies	23
	Anthropology	24
	Art (M.A., M.F.A.)	24
	Botany (M.S., Ph.D.)	28
	Business Administration (M.B.A.)	29
	Chemistry (M.S., Ph.D.)	35
	Comparative Arts (Ph.D.)	38
	Computer Science	40
	Dance	41
	Economics (M.A.)	41
	Education (M.Ed., Ph.D.)	43
	Engineering and Technology (M.S., Ph.D.)	57
	English Language and Literature (M.A., Ph.D.)	68
	Environmental Studies (M.S.)	71
	Film (M.A., M.F.A.)	72
	Foreign Languages and Literatures (M.A.)	74
	Geography (M.A.)	78
	Geological Sciences (M.S.)	80
	Health and Sport Sciences (M.S., M.Ed.)	82
	Health Services Administration	83
	Hearing and Speech Sciences (M.A., Ph.D.)	84
	History (M.A., Ph.D.)	87
	Home Economics (M.S., M.Ed.)	92
	Individual Interdisciplinary Programs (M.A., Ph.D.)	95
	Industrial Technology Education (M.Ed.)	95
	International Affairs (M.A.)	96
	Interpersonal Communication (M.A., Ph.D.)	98
	Journalism (M.S.)	101
	Liberal Studies (M.L.S.)	102
	Linguistics (M.A.)	104
	Mass Communication: Journalism, Telecommunications (Ph.D.)	105
	Mathematics (M.S., Ph.D.)	105
	Music (M.M.)	108
	Ohio Program of Intensive English	110
	Philosophy (M.A.)	111
	Physics and Astronomy (M.S., Ph.D.)	112
	Political Science (M.A.)	114
	Psychology (M.S., Ph.D.)	116
	Social Sciences (M.A.)	118
	Sociology (M.A.)	119
	Telecommunications (M.A.)	121
	Theater (M.F.A., M.A.)	122
	Zoological and Biomedical Sciences (M.S., Ph.D.)	126
	Faculty	131
	Application Forms	141-144
	Recommendation Blanks	145-150
	Schedule of Academic Fees	<i>Inside back cover</i>
	Notification Card	<i>Inside back cover</i>

The programs and requirements contained in this bulletin are effective with the 1983 fall quarter. They are necessarily subject to change without notice at the discretion of Ohio University.



Graduate Catalog

Ohio University Bulletin

Each student should assume responsibility for knowing current requirements for graduate programs and for complying with current procedures.

General Information

The general policies, regulations, calendar, and fees contained in this bulletin are necessarily subject to change without notice at the discretion of Ohio University.

PROFILE OF OHIO UNIVERSITY

Ohio University was established in 1804 and was the first institution of higher education in the Northwest Territory. The enrollment on the main Athens campus is approximately 14,500, while the four regional campuses and the academic centers in southern Ohio additionally enroll over 5,700. The full-time faculty numbers over 800. There are more than 200 part-time faculty and over 800 graduate associates, graduate staff associates, graduate research associates, and graduate teaching associates.

On the graduate level, Ohio University offers master's degrees in nearly all of its major academic divisions and doctoral degrees can be earned from selected departments, as indicated on page one of this bulletin. The College of Osteopathic Medicine offers a four-year professional program leading to the doctor of osteopathy degree. The present graduate enrollment is about 2,500, 1,700 of whom are full-time students.

The University is accredited by the North Central Association of Colleges and Secondary Schools and by the recognized professional accrediting associations identified with its major academic divisions. It holds membership in the leading state and national educational and professional associations.

The University's academic calendar consists of four quarters of from 10 to 12 weeks' duration, the summer session having two five-week terms. Many students find it advantageous to register for all four quarters, thus having an opportunity for uninterrupted study and research. A graduate appointee (graduate associate, graduate staff associate, graduate research associate, or graduate teaching associate) has the added benefit of study with only a general fee of \$120 charged during the summer quarters immediately preceding and following the period of regular appointment. Some graduate appointments and scholarships are available during the summer session as well as in the regular academic year.

DEGREE-GRANTING COLLEGES

College of Arts and Sciences

The College of Arts and Sciences offers the master of arts or master of science degree through 16 departments. Multidepartmental and special-discipline master's degrees are offered in liberal studies, social sciences, and environmental studies. Doctor of philosophy degrees are offered through eight departments, including: botany, chemistry, English, history, mathematics, physics and astronomy, psychology, and zoological and biomedical sciences. More than one area of emphasis is available at both degree levels in several of these departments.

Among the college's graduate facilities and equipment are a tandem Van de Graaff nuclear accelerator, a helium low-temperature laboratory, three electron microscopes, a mammalian recombinant DNA laboratory, several chemical spectrometers, a photomicroscopy laboratory, a herbarium with over 4,500 species, and a large preserve of remnant primary forest. Each department will provide, upon request, a brochure describing specific degree requirements and specialized graduate facilities, and any other type of information that a prospective student might need.

College of Business Administration

The Ohio University M.B.A. program is one of the 150 among the 600 M.B.A. programs in the United States which are fully accredited by the American Assembly of Collegiate Schools of Business. Candidates can earn the degree in from one to two academic years, depending upon their previous coursework. The foundation year courses (referred to as Phase I) are waivable if taken as undergraduates. An accelerated summer program is available for students who have little or no undergraduate background study in business. Most of the Phase I courses are offered in this program. Candidate applicants should note that Phase II (advanced level) is given in one sequence only, beginning in the fall of each academic year. Although admission is possible for any of the four quarters, students should plan on entering according to their Phase I needs. These courses should be completed before planning to enter the fall Phase II courses.

Because the Ohio University program is relatively small, students get to know each other as well as to interact frequently with faculty. Although the majority of the students are American, each class contains students from all over the world. Their academic backgrounds are more often than not in nonbusiness fields.

A limited number of partial and full graduate associateships and tuition scholarships are available to qualified students who meet the program's criteria.

College of Communication

The College of Communication offers a variety of graduate programs designed to provide both academic and professional training. The master's degree is offered by the three major schools in the college: Interpersonal Communication, Journalism, and Telecommunications (formerly Radio-Television). In addition, the college has a Ph.D. program in the School of Interpersonal Communication and a mass communication Ph.D. program which is administered jointly by the schools of Journalism and Telecommunications. Laboratory opportunities are provided through television station WOUB-TV on channel 20, radio stations WOUB AM and FM, a community cable television channel, a modern electronic graphics lab in journalism, and research centers in the various schools.

Financial support is available in the form of teaching, research, and graduate associateships in each of the schools. The programs also offer tuition scholarships and a limited number of fellowships.

Detailed information concerning graduate programs and possible financial support may be obtained by writing directly to the Director of Graduate Studies of the School of Interpersonal Communication, School of Journalism, or School of Telecommunications; Ohio University, Athens, Ohio 45701.

College of Education

Graduate study and research in the College of Education place primary emphasis on bridging the gap between theory and practice — between research and the everyday educational and human problems that confront students, teachers, counselors, curriculum workers, administrators, and other professionals in related fields.

The college offers the master of education degree in secondary education, elementary education, special education, educational media, reading, industrial technology, educational administration (public/private/higher education), guidance and counseling, and student personnel services (school, community agencies, postsecondary-education settings). A master of arts is offered in economic education. A six-year program is offered for those professionals who seek specialization and/or certification in principalship or superintendency. The doctor of philosophy is offered in curriculum and instruction, guidance and counseling, student personnel services, educational administration, and higher education.

Master's students may attend full- or part-time; there is no residency requirement for a master's degree. A master's student attending full-time could complete most programs in a minimum of four academic quarters. The doctor of philosophy requires a three-quarter continuous residency on the Athens campus and can be completed in a minimum of three academic years.

These programs strive for a balance between theory and practice and between academic research and its applications. Practice and internships in various settings constitute an important component of these advanced programs.

Interdisciplinary study is encouraged when appropriate to the program.

All professional education programs are fully accredited by the National Council for Accreditation of Teacher Education (NCATE).

Detailed information concerning graduate programs may be obtained by writing to Graduate Studies, McCracken Hall, Ohio University, Athens, Ohio 45701.

College of Engineering and Technology

Programs of graduate studies leading to the master of science degree are available in chemical, civil, electrical, industrial and systems, and mechanical engineering. In addition, programs leading to the Ph.D. degree are offered in chemical and electrical engineering. Details on program requirements are given in the departmental section of this bulletin.

The graduate programs in engineering are enhanced by a recent eight-million dollar endowment provided by a distinguished alumni, the late Dr. C. Paul Stocker and his wife Beth. In addition to this, they provided two endowed chairs, scholarships, and faculty enrichment programs. The college will be moving into the new Stocker Engineering and Technology Center in the fall of 1984. This facility will provide additional space and research capabilities.

Research activities in chemical engineering include areas in polymers and coal gasification. Other areas include biomedical, transport phenomena, thermodynamics, and process dynamics.

Civil engineering faculty have expertise in the areas of hydrology, soil mechanics, structures, geotechnical, environmental engineering, and transportation systems.

The Electrical and Computer Engineering Department, the largest of the five engineering departments, is the recipient of one-half of the eight million dollar endowment. With approximately three-quarters of a million dollars of externally funded research, in addition to that supported internally by the Stocker Endowment, they have many areas of active research, including the design and control of electrical power systems, control and information systems, microprocessor and computer engineering, signal processing and communications, image processing, electromagnetics, network theory, and solid state electronics. In addition, the Avionics Research Center, which is also associated with the Department of Electrical and Computer Engineering, has active student involvement in its externally funded contract research related to aircraft instrument landing systems, navigation, and other aspects of aviation safety.

Industrial and systems engineering faculty and students are actively involved in research efforts in several aspects of human factors engineering including visual display and perception, operations research, and engineering management. A mining option, which is aided by active research programs in mining systems, is housed in the Industrial and Systems Engineering Department.

Mechanical engineering research activities include robotics, computer-aided design, automated manufacturing systems, fluid dynamics of gas solid flows, and the design of advanced energy systems.

College of Fine Arts

The College of Fine Arts at Ohio University offers graduate degrees in five of its six components. The School of Art offers an M.F.A. in ceramics, painting, photography, printmaking, sculpture, and art history. The M.A. is offered in art education and photography. The Department of Compara-

tive Arts offers a Ph.D. program in liberal, humanistic study in the arts of western civilization. The School of Dance does not offer a graduate degree; however, some graduate courses are available each quarter. The Department of Film offers an M.F.A. in film scholarship or production and an M.A. in scholarship. The School of Music offers the master of music in applied music (performance and performance-pedagogy), history and literature, theory and composition, or music education. The School of Theater offers an M.F.A. or M.A. in playwriting and the M.F.A. in the professional programs of acting, directing, and production design.

In addition to the stipulated programs within each academic unit of the college, an interdisciplinary M.A. or M.F.A. within the College of Fine Arts is available by combining two or more areas of the fine and performing arts. Also, see the Individual Interdisciplinary Programs section of this catalog for other options.

College of Health and Human Services

The College of Health and Human Services was established as Ohio University's ninth degree-granting college in January, 1979. It became operational July 1, 1979, with a mission of promoting an environment within which students may pursue undergraduate and graduate degrees in health and human service fields. The college includes the schools of Health and Sport Sciences, Hearing and Speech Sciences, Home Economics, and Nursing. Graduate programs are available as follows:

Master's degrees — physical education, physiology of exercise, sports administration, hearing and speech sciences, and home economics.

Areas of Study: Areas of study in the physical education program include: a. Athletic Training, b. Athletic Administration, c. Master Teacher of Physical Education, d. Recreation Studies, e. Foundations of Coaching, f. International Sport Studies, and g. Administration of Physical Education. The School of Hearing and Speech Sciences offers areas of study in audiology and/or speech pathology. Areas of study in Home Economics are: a. Home Economics Education, b. Food and Nutrition, c. Textiles and Clothing, and d. Child Development and Family Life.

Doctoral degree — hearing and speech sciences.

Areas of Study: Primary areas of study at the doctoral level are speech and language pathology, audiology and speech science.

The Institute for the College of Health and Human Services is a newly created unit which is developing several new professional health science education programs including such areas as physical therapy and health service administration.

The Child Development Center provides training and clinical experiences for students from various disciplines both within the college and from other units within the University.

An interdisciplinary unit of the college is the Center for Human Development, providing training, evaluation, therapy, clinical experience, and research related to individuals with developmental disabilities and special needs.

College of Osteopathic Medicine

The University offers a program leading to the doctor of osteopathy (D.O.) degree through its College of Osteopathic Medicine. Admission to the college is on a highly selective basis with only about five percent of the applicants being accepted. A bachelor's degree as well as specific grade-point averages and other coursework are required

for consideration. The emphasis of the curriculum is on the training of family physicians for underserved areas of Ohio. For further information the interested student should write for a copy of the College of Osteopathic Medicine catalog. Address such inquiries to: College of Osteopathic Medicine, Ohio University, Athens, Ohio 45701.

FACILITIES AND SERVICES

Office of Graduate Student Services

The Office of Graduate Student Services assists students with the University processes of admission and registration and is a source of information on matters affecting graduate students. Personnel of this office are available for consultation and assistance on matters of interest to graduate students. **All official graduate files are kept in this office.**

Affirmative Action Plan

It is the policy of Ohio University that, in education and employment opportunities, there shall be no discrimination against any individual because of race, color, creed, national origin, handicap, or sex. Also, there shall be no discrimination because of age except in compliance with age requirements of retirement plans or state and federal laws and guidelines.

Furthermore, the University conducts a vigorous affirmative action program in order to promote equal employment opportunities and to insure nondiscrimination in all educational programs and activities.

Details of the University's Affirmative Action Plan, as well as information about related policies and state and federal nondiscrimination laws and guidelines, are available through Affirmative Action Office, 103 McGuffey Hall, Ohio University, Athens, Ohio 45701.

Career Planning and Placement

The Office of Career Planning and Placement, located in Lindley Hall, is designed to assist all students and alumni who seek career or graduate school information.

The Office of Career Planning and Placement assists students in obtaining information regarding the types of careers possible with various subject concentrations, the preparation required for given careers, and the relative opportunities for individuals in various fields for the years ahead.

Traditionally, students have not established contact with Career Planning and Placement offices until their senior year. Since it is now more important than ever to give careful thought and consideration to the planning of one's career, students are encouraged to consult the Office of Career Planning and Placement, the chairpersons of academic departments, or one of the academic deans during their first year of matriculation. Some of the critical functions of the Office of Career Planning and Placement include assisting the student in assessing capabilities, interests, and skills; exploring opportunities associated with acquired knowledge; and preparation for the interview and job search process (i.e., resume preparation, interviewing skills).

The Office of Career Planning and Placement serves as a liaison between alumni, students, various school systems, business, and industries. Representatives from these areas are invited to the campus for the purpose of sharing infor-

mation and interviewing prospective employees. **Only equal opportunity employers are permitted to recruit on campus.** A credential process is also maintained for each student upon request and the payment of a nominal fee. This includes the student's academic record and personal references, all of which are made available to prospective employers with the consent of the student.

Computing and Learning Services

Computer Services. The Instruction and Research Center provides state-of-the-art computing resources and facilities to all Ohio University students at no charge. Professors or instructors will arrange for students to have access to the computer resource.

The Instruction and Research Center operates a number of satellite labs across the campus where the students may use computer terminals or microcomputers for their academic work. All labs have a program advisor on duty who will assist students with programming language problems and in using the computer facilities. All terminals in the labs can be used to access Ohio University's network of computers.

Two of the labs, the Alden Instruction Support Lab and the Copeland Microcomputer Lab, have a variety of microcomputers available to students. A wide array of software is available for the microcomputers, including FORTRAN, PASCAL, BASIC, WORDSTAR, APPLE PILOT, SUPERCALC, and others.

The Alden Support Lab also houses 26 audio-visual workstations where students use video tape recording equipment as well as film strip and sound-and-slide equipment for labs required by certain academic courses.

The main offices for the Instruction and Research Center and the Haning Instruction Support Lab are located on the first floor of Haning Hall. The Alden Instruction Support Lab is located on the second floor of the Alden Library, and the Copeland Microcomputer Lab is in Copeland Hall, Room 17. The lab located in Jefferson Hall contains a printer and a cluster of terminals, and is a pilot program aimed at bringing the computer facilities into the student residence halls for the convenience of the students.

Learning Resources Center. The Learning Resources Center, housed in Alden Library, provides audio/visual facilities and services to the entire University community.

Telephone Service. Telephone service is not part of the Room and Board Contract. Students wishing telephone service must sign up directly with General Telephone Company of Ohio after room assignments are made.

Counseling and Psychological Services

Counseling and psychological services are available to graduate and undergraduate students on an individual and/or group basis for: *personal adjustment problems* (including those of an emotional, marital, sexual, or social nature), pregnancy concerns, general dissatisfaction, or not living up to one's potential in various endeavors; *academic difficulties* such as exam panic and other performance anxieties or not performing up to one's academic potential; and *career concerns* which include being uncertain about educational or career objectives.

Occupational information is available about career areas, including information about the nature of duties and present and future demands related to a wide variety of occupations. No appointment is necessary for the use of this information.

The Miller Analogies Test (MAT) is administered on a weekly appointment basis.

Students who wish to obtain confidential consultation about academic, career, or personal adjustment concerns may contact the receptionist on the third floor of the Hudson Health Center or call 594-6081.

Graduate Council

The Graduate Council is advisory to the provost and may make policy recommendations to the provost on matters relating to graduate programs. These matters include, but are not limited to, graduate faculty status, graduate student time extensions, and admission standards and program monitoring. It also provides review critique to the Curriculum Council for new graduate programs.

The council is composed of faculty responsible for graduate education in their departments and of graduate students. The composition of the Graduate Council is representative both of those departments granting Ph.D. degrees and of those granting only master's degrees.

Graduate Student Senate

The Graduate Student Senate is composed of student representatives from each graduate academic department. Its purpose is to represent the graduate student body in the University community and to provide a forum in which graduate students can discuss issues related to their concerns about both academic and nonacademic aspects of the community.

The Graduate Student Senate is recognized by the University as the representative graduate student organization, and therefore is responsible for recommending graduate students for positions on University standing committees. The senate also awards the Outstanding Graduate Faculty Award and the Graduate Student Senate John Houk Memorial Research Grants for graduate student research each year. Other Graduate Student Senate activities include workshops on such topics as grants writing and library resource system identification and use, and yearly research activities on the quality of graduate life and education.

The Graduate Student Senate meets on a regular basis year-round. All meetings are announced and are always open to the public.

Anyone wishing more information or a copy of the Graduate Student Senate constitution may write the President of Graduate Student Senate, Ohio University, Athens, Ohio 45701.

Information Center

A complete information service for students and campus personnel, in the lobby of Baker Center, provides answers to questions regarding University services programs, and facilities.

The Information Center has Ohio University brochures, the campus directory, academic and social calendars, and listings of University committees and departmental chairmen. It receives applications for student participation on University committees and researches questions when information is not immediately available.

For University personnel and student telephone numbers, call the University switchboard by dialing "8" from any University phone or dial 594-5511 when calling from outside the University.

Ohio University Libraries

The Alden Library has a capacity of 1,400,000 volumes and seating for 3,200 patrons. The central facility serves the entire student body and faculty with special services available throughout the seven-story building. The library is open seven days a week for a total of 102 hours.

The main campus entrance is on the fourth floor, where the public catalog and main circulation desk are housed. The reference collection, children's collection, current periodicals, Interlibrary Loan, and Resources and Technical Services staff are also located on this central floor, as is a collection of national and trade biographies. Government documents and Archives and Special Collections occupy the fifth floor, while the top two levels contain the research collection, graduate lockers, and faculty studies.

The Health Science Library, student lounge, and a reserve book room are on the third floor. On the second floor is the Fine Arts Department. The Southeast Asian Collection, Microform/Map/Nonprint Department are located on the first floor.

The main collection consists of more than 1.1 million volumes, of which over 395,000 are government documents arranged by Superintendent of Documents classification. In addition, there are more than 27,000 pamphlets in vertical files, 120,000 maps, and more than 6,000 periodical titles currently received. There are extensive holdings in microform format, 800,000 units. Microform holdings have increased greatly in the last few years and are an extremely rich, but an often overlooked, resource base. Graduate students are encouraged to visit the microform area to explore the holdings, most of which are not listed in the public catalog.

In separate buildings are the Music/Dance Library, Slide Library, and a number of departmental collections in several scientific disciplines. Each of the regional campuses also has a well-established library facility.

Expedited on-line service through the OCLC has made collections from across the country accessible through Interlibrary Loan.

To make the library's collection more accessible to its users, orientation films, general tours, and instructional lecture tours are offered to classes, groups, and individual graduate students upon request. Subject bibliographers' services are available to give assistance with problems in specific academic disciplines.

On-line information retrieval systems, including MEDLINE, SDC, New York Times Information Bank, and Lockheed are available. Through the OCLC nationwide shared cataloging and interlibrary loan network, library collections across the country are now easily and readily accessible. The library is a part of the age of resource sharing to better serve the graduate student and academic community.

Medical Services

Medical Services facilities are located in the Hudson Health Center. They include an outpatient clinic and complete ancillary services, including x-ray, clinical laboratory, physical therapy, pharmacy, a dental clinic, and health education services.

The Medical Services staff includes several full-time physicians; a dentist; a pharmacist; a coordinator of health education services; registered nurses; and registered laboratory, x-ray, and other allied personnel.

A continuous health record is maintained on each student, beginning with the report of medical history obtained at the time of the student's first visit to the Hudson Health Center for evaluation and/or treatment of any medical condition.

A tuberculosis skin test accomplished by the University Medical Services is required at the time of the student's first arrival on the campus of all new international students and those returning after an absence of two or more years.

Major Medical Insurance Plan. A major medical insurance plan designed to supplement the care provided by the University Medical Services is mandatory for every student registered for more than six hours unless the student submits evidence of coverage by a comparable private insurance plan.

The plan provides protection against major medical and surgical expenses regardless of where the student may be. In addition to the medical and surgical benefits payable under the terms of the group plan contract, an accidental death payment is part of the policy.

To assist married students, a major medical-surgical expense insurance plan for dependents is available through the University comprehensive group medical insurance policy.

Motor Vehicles

University policy and regulations state that no student shall drive, operate, park, or otherwise use a motor vehicle on the land and property of the University without first registering said vehicle with the director of security. This regulation includes student-owned vehicles, vehicles belonging to parents or relatives (including wives or husbands), friends, rental agencies, and dealers.

Upon registration each quarter, the student will be given a decal which must be attached to the vehicle as described in the brochure issued with the decal.

No two- or three-wheeled motor vehicles or motorized bicycles are permitted on University property except in areas specially designated for the parking of said vehicles. Signs posted indicate streets closed to these vehicles.

Ombudsman of the University

The ombudsman's duties include the maintenance of simple, orderly procedures for receiving requests, complaints, and grievances, both from students and from other members of the University community. The ombudsman works, where a pattern of grievances develops, for a change in regulations, procedures, or personnel to prevent problems. Further duties include assisting individuals in accomplishing the expeditious settlement of their problems; intervening in the bureaucratic process on behalf of individuals when said process unnecessarily or unfairly impinges upon them and using broad investigatory powers and direct and ready access to all University officials of instruction and administration. Finally, the ombudsman reports valid complaints directly to the president when no remedy has been found elsewhere in the University.

The office of the ombudsman of the University is located in 203 McGuffey Hall, telephone 594-6725.

Research and Sponsored Programs

The Office of Research and Sponsored Programs assists faculty and graduate students in obtaining grants for external support of research, doctoral dissertations, fellowships, and other University-based projects. The office maintains a library of information sources on grant opportunities which is open to all members of the University community. Graduate students are often appointed to externally supported faculty-directed research projects as graduate research associates and receive a stipend and tuition waiver.

LIVING ARRANGEMENTS

Residence Halls and Meal Plans

Boyd Hall. This attractive residence hall on the West Green has been designated as the official University Graduate Residence Center and is available on a year-round basis for male and female graduate students both. All rooms are single or double accommodations with the dining hall for the West Green located on the ground floor. Boyd Hall offers lounges on each floor, a 24-hour exterior locking system for resident privacy, a recreation and study facility in the basement, and a soon-to-be-installed kitchenette.

Boyd Hall is an especially convenient location for graduate students in the colleges of Business Administration, Engineering and Technology, and Health and Human Services, and many departments of the College of Arts and Sciences, as well as the medical students in the College of Osteopathic Medicine. This quiet residential setting is especially helpful for graduate students seeking to experience a living-learning environment.

Meal Plans. The Food Service Department of Ohio University offers two meal plans to the students in our residence halls. The 20-meal plan provides three meals per day except for Sunday when only brunch and dinner are served. There is also the 14-meal flexible plan which allows the student to select any 14 meals served during a week. As a graduate student, you may select the room-only option and purchase meals on a pay-as-you-go basis.

For graduate students, it is our intent to provide housing at a nominal cost during the breaks between the fall and winter quarters and the winter and spring quarters when most residence halls are normally closed. Although such housing may be in your permanently assigned hall, *it may also be necessary to consolidate those students who do remain on campus during the breaks into other facilities, which would mean you would have to make a temporary change of residence.*

Please note that there is a period of about 40 days from Thanksgiving through New Year's Day that Ohio University is not in session. You should plan to have sufficient funds to cover your living expenses for this time period. The room cost on campus will be about \$4* per night and food service will *not* be available on the campus. Meal costs in local restaurants will be considerably more than the per-day cost of your regular board plan.

While graduate students are not required to live in University housing, many do take advantage of our facilities. *All University residence hall contracts are binding for the entire academic year (fall, winter, and spring quarters) unless you graduate or leave Ohio University.* If you are interested in information about University-owned family living units, or if you have questions about the graduate halls, please contact the Housing Office, Chubb Hall, Athens, Ohio 45701 (phone 614/594-5151).

Students residing off-campus may arrange to eat in University dining halls by signing an outside-boarder contract. These arrangements can be made through the Housing Office on a quarterly basis. Meals are served throughout the academic year except during intersessions between quarters.

After admission to Ohio University, each graduate student will receive information concerning the residence halls. These materials will provide specific rates for room and board, facilities available within the halls, and services provided. Should you have other questions about residence halls, contact the Director of Housing, Chubb Hall, Ohio University, Athens, Ohio 45701.

Graduate students are eligible for head resident positions in campus fraternity and sorority houses. Compensation ranges from room only to room and board and a small salary. For further information, contact the Office of Student Life, Baker Center.

Family Living Apartments

Ohio University has two housing complexes which are rented primarily to married students. The Wolfe Street Apartments are located on the southeast corner of the main campus, near the graduate science building. The Mill Street Apartments are six blocks northeast of the main campus, adjacent to the intramural fields.

Linen, bedding, dishes, lamps, and rugs are *not* furnished in the Wolfe Street or Mill Street apartments. Air conditioners are permitted provided guidelines established by the University are followed. Furniture may be arranged to suit the occupants, but University furnishings may not be stored or removed from the apartments.

Mill Street Apartments. Each apartment in the Mill Street complex, which consists of 13 modern brick buildings, is furnished with an electric range, refrigerator, and draperies. There are three coin-operated laundries conveniently located within the housing complex.

All utilities are included in the monthly rent, and a telephone outlet and an outlet for the television cable are provided in each unit. Either or both of these services may be obtained by contacting the appropriate company — General Telephone Company of Ohio or Continental Cablevision. The cost of these two optional services is not included in the rent.

One Bedroom. There are 66 one-bedroom apartments housed in a six-story building which has elevator service to accommodate both passengers and furnishings. There are both furnished and unfurnished apartments available. The current monthly rental rates (subject to change as economic conditions warrant) are: furnished \$277* and unfurnished \$244*.

Two Bedroom. Each of the 127 apartments, housed in 12 smaller buildings, has direct access to the outdoors. The buildings are grouped around interior courts with children's play areas. There are ample parking facilities for tenants and an area for guest parking in the rear lot. The current rental rate for the furnished two-bedroom apartment is \$320*, unfurnished, \$288* (subject to change as economic conditions warrant).

Wolfe Street Apartments. All of the Wolfe Street Apartments, located in two two-story brick buildings, are furnished except for draperies. All utilities are included in the rent, except for the telephone and TV cable. Laundry rooms with coin-operated machines are located in the complex.

There are four types of apartments at Wolfe Street, as follows:

Efficiency (4)	\$190
One Bedroom (38)	\$217
Bedroom-Nursery (8)	\$239
Two Bedroom (2)	\$266

(All apartment rental rates are subject to change as economic conditions warrant.)

*All costs subject to change.

CULTURAL EVENTS AND ENTERTAINMENT

University students have the opportunity to attend theatrical productions of touring companies as well as plays presented by the School of Theater. The Ohio Valley Theater, a joint community-University organization, stages a series of outstanding productions each summer. The School of Music and the School of Theater cooperate in producing musicals, with the former offering many recitals and concerts by faculty, students, and music organizations.

The Cultural Activities Committee sponsors internationally known instrumentalists and vocalists, symphony orchestras, chamber music groups, opera and ballet companies, and theater companies. The University invites guest artists and distinguished persons to lecture or appear in recital, and to talk informally with students and faculty.

A variety of art exhibitions, including work by the School of Art faculty and students, are displayed in the Seigfried Hall gallery. In addition, special shows and visiting exhibits are presented in the Trisolini Gallery.

Pop concerts by contemporary entertainers are sponsored by student organizations on campus. First-run movies, foreign films, experimental movies, and classic films are shown throughout the year.

The Edwin and Ruth Kennedy Lecture Series brings many distinguished lecturers to the campus, while speakers on a variety of topics are sponsored by campus organizations.

The University's radio stations, WOUB-AM and -FM, and the educational television station, WOUB-TV, provide entertaining and educational programming for the University and the Athens community.

RECREATION

Recreational facilities include gymnasia; an indoor ice skating rink; tennis courts; a new natatorium, which includes a 50-meter indoor pool (currently under construction); athletic fields; and areas for activities ranging from softball to horseshoe pitching.

Ohio University is a member of the Mid-American Conference and participates in intercollegiate competition in football, basketball, baseball, tennis, swimming, golf, track, wrestling, and cross-country.

The Baker University Center provides facilities, services, and programming for students, faculty, staff, visitors, and members of the Ohio University-Athens community. The building contains lounges, a large ballroom, dining rooms, television, and conference rooms and areas for bowling, billiards, and cards. Any type of food catering service can be provided. The center operates the all-campus Information Center and also provides the staff and facilities for the Rumor Control Center if it is needed. The office of the director of the center is open to provide assistance and guidance to individuals and groups desiring to use the center.

Many of the state's most scenic areas are located near Athens and are used as weekend retreats by students and faculty. Included are Dow Lake, located just east of Athens in a 200-acre state park and used by the University for educational and research projects; Lake Hope, located in Zaleski State Forest about 25 miles from Athens; the caves and gorges of the Hocking Hills State Park area; Burr Oak Lake, Glouster; and Lake Snowdon, Albany.

Application and Admission

APPLICATION

The prospective student submits to the Office of Graduate Student Services the application forms, two official transcripts from each post-secondary school attended, official test scores as required by the department, a \$25 nonrefundable application fee for admission to a degree program, and any other pertinent information in support of the application. Nondegree and transient admission is \$15; nondegree to degree status, or to a second degree program is \$10. Letters of recommendation are sent directly to the graduate committee of the department to which application is made.

Copies of the above materials are forwarded by the Office of Graduate Student Services to the department of the student's choice, and the departmental graduate committee recommends admission or denial of admission to the appropriate degree-granting college. The college in turn forwards its decision to the Office of Graduate Student Services. There, the student's file is checked for completeness and a letter is sent to the student indicating admission, admission pending fulfillment of admission requirements, or denial of admission.

The Office of Graduate Student Services considers the departmental recommendation and informs the student by letter that admission is being granted (with any relevant conditions) or that admission is being denied.

Approval for admission to graduate study will be based on possession of a bachelor's degree from an accredited college or university and such factors as undergraduate scholastic point-hour ratio (both overall and in the proposed graduate major), selection of courses, pattern of grades, recommendations, test scores, work experience, and other matters which are relevant. Each department will give appropriate weight to the factors pertinent to its academic field.

A student with a bachelor's degree from an unaccredited institution usually will be required to supplement the undergraduate record with a satisfactory score on an acceptable standard college ability test.*

Supporting evidence of the student's ability in the form of the Graduate Record Examination, Graduate Management Admission Test, Miller Analogies Test, or other college ability tests may be required.* The student should consult with the specific department about necessary test requirements.

Applications for admission, supporting credentials, including official transcripts of all academic work, and the \$25 nonrefundable application fee (a check or money order payable to Ohio University), should be received at least six weeks before registration for the quarter or summer term in which the student wishes to begin graduate study. Some departments have earlier deadlines for admission and financial support. Consult the section on courses of instruction in this bulletin for specific departmental deadlines.

All documents received by the University in connection with applications for admission become the property of Ohio University. Under no circumstances will they be returned to the applicant or forwarded to any agency or oth-

er college or university. Documents of students who are admitted to a graduate program but who fail to enroll for the quarter for which they are admitted are destroyed. Materials will be held, however, for a maximum of one year if the student notifies the Office of Graduate Student Services in writing of a postponement of enrollment.

All correspondence pertaining to the admission of a student to a graduate program should be addressed to Director of Graduate Student Services, Wilson Hall, Ohio University, Athens, Ohio 45701.

SPECIAL NOTE FOR STUDENTS IN EDUCATION: Any student who has earned a master's degree in education at Ohio University and who plans to take additional work in education must reapply through the Office of Graduate Student Services for admission.

*Those who have taken any of these tests are urged to have their scores reported to the Office of Graduate Student Services, Ohio University, Athens, Ohio 45701.

Further information about the Graduate Record Examination (given in January, February, April, June, October, and December) or the Graduate Management Admission Test (given in January, March, July, November) may be obtained by writing to the Educational Testing Service, Box 955, Princeton, New Jersey 08540. Applicants in the West Coast region should write to the E.T.S., Box 1502, Berkeley, California 94701. Students on the Ohio University campus may obtain test application forms from the Office of Graduate Student Services.

Information on the Miller Analogies Test may be obtained from The Psychological Corporation, 304 E. 45th St., New York, New York 10017. This test may be taken at Ohio University through the Counseling and Psychological Services, Hudson Health Center.

CATEGORIES OF ADMISSION

Ohio University has three categories of graduate admission: degree, nondegree, and transient.

Any admission to a graduate program must be regarded as provisional until the student has provided a final, official transcript from his or her undergraduate institution showing receipt of the bachelor's degree, and from any other post-secondary school attended.

Degree

1. Those students approved by the major department for unqualified admission to a graduate degree program are given *unconditional* admission. Only students on *unconditional* admission status are eligible for University-funded associateships, fellowships, and/or scholarships.

2. Those students who have some deficiency in the entrance requirements including a grade-point average below 2.5, may be approved by the department for *conditional* admission. Students in this category may achieve *unconditional* admission after the satisfactory completion of a prescribed program to remove any academic deficiencies, and by attaining a 3.0 or better grade-point average on the first 15 hours of graduate course credit. The departmental graduate committee will specify whether undergraduate courses which are required of a graduate student as further preparation for admission will be taken for audit or credit. Grades earned in such courses may be used by the graduate committee in evaluating the student's capability for graduate work. Undergraduate or audited courses will not satisfy requirements for any graduate degree. A student is eligible for University-funded associateships, fellowships, or scholarships *only* after he or she has received *unconditional* admission. A 3.0 or better grade-point average must be maintained to retain University financial support.

Nondegree

A student who wishes to take graduate courses, with no intention of working toward a graduate degree at Ohio University, must apply for admission in the regular manner but as a *nondegree* student. Approval for such admission does not constitute admission to a degree program, and the credit earned cannot normally be applied toward a graduate degree at Ohio University. In exceptional cases the appropriate academic departments will determine which courses, if any, taken while in a nondegree status may be applied subsequently toward degree requirements.

No more than 18 hours of academic work may be taken by a nondegree student, within a time limit of six years.

Transient

A graduate student currently working toward a graduate degree at another university may earn graduate credit at Ohio University to be transferred to the other university. The student may be admitted to a *transient* status by submitting an application, a \$15 nonrefundable application fee, and an official statement of good standing from the *dean of the graduate school* in which he or she is enrolled. Such a student must request permission *each* quarter to register at Ohio University as a transient student.

Senior for Graduate Credit

An Ohio University student who has not yet completed all requirements for the bachelor's degree may be eligible for graduate study as a senior. The student must have an overall grade-point average of at least 2.5, and must be within nine credits of completing the total number of credits required for the bachelor's degree. Permission to take such courses does *not* constitute admission to a graduate degree program (see next section). The student may take graduate courses carrying graduate credit after securing the written recommendation of the dean of his or her undergraduate college and the graduate chairman of the department offering the graduate courses. The student admitted as a senior for graduate credit pays undergraduate fees and is not eligible for graduate associateship or scholarship support. Application for this privilege must be made in advance of registration through the Office of Graduate Student Services. This privilege may also be extended to a well-qualified senior at another university who has nine or fewer credits to complete for the bachelor's degree.

Early Admission to a Graduate Degree Program

A superior undergraduate student may seek early admission to a graduate degree program. The student must have an overall grade-point average of at least 3.5 and must have completed all undergraduate requirements except the total credit requirement by the time of entry into the graduate degree program. After securing the written recommendation of the student's department, the departmental graduate committee, and the dean of his or her undergraduate college, the student may be admitted into a graduate degree program and may enroll in graduate courses for graduate credit. These courses can be used to satisfy both undergraduate and graduate degree requirements. Application for this privilege must be made in advance of registration through the Office of Graduate Student Services.

APPLICATION AND ADMISSION FOR INTERNATIONAL STUDENTS

To be eligible for consideration for admission, an international student must have attained high scholastic distinction.

Materials required for admission to Ohio University are the application forms, the \$25 nonrefundable application fee, official test scores as required by the department, official transcripts from each post-secondary school attended, and any other pertinent information in support of the application. If transcripts are not in English, they must be translated and signed and certified as true copies by the registrar of the institution or by an official of the country's Consulate. Transcripts should be submitted prior to admission to a program, but if this is not possible it is the student's responsibility to see that final, official transcripts are on file in the Office of Graduate Student Services no later than the end of the first quarter of their program. Failure to produce final transcripts could result in dismissal from a program. All prospective students whose native language is not English must submit evidence of proficiency in the English language. Applicants must send results of the Test of English as a Foreign Language (TOEFL) to the Office of Graduate Student Services. A student who submits a TOEFL score below 550 but who is admissible to a graduate program on all other criteria may be provisionally admitted. Regardless of the preadmission TOEFL score, *all newly* admitted international students will be tested for English proficiency upon arrival at Ohio University. Tests must be taken within the first ten days of the quarter. If the on-campus proficiency test confirms a TOEFL score below 550, the student will be required to enroll in a language course of the Ohio Program of Intensive English. If the on-campus proficiency test confirms a TOEFL score above 550, the student will usually be permitted to begin a full program of graduate-level study. However, depending upon the proposed field of study, some students with TOEFL scores above 550 may be required to enroll in a part-time supplemental English course of the Ohio Program of Intensive English. Students who are provisionally admitted with a TOEFL score between 500 and 550, or who are required to enroll in supplemental English despite a TOEFL of 550 or higher, will be required to enroll in an English course for at least one quarter. However, students provisionally admitted with a TOEFL score between 400 and 500 should be aware that required enrollment in the courses of the Ohio Program of Intensive English may delay enrollment in a graduate program by as much as three quarters. Only after a student has completed the Ohio Program of Intensive English and is enrolled in his or her graduate program is he or she eligible for University-funded associateships, fellowships, or scholarships.

International applicants must submit evidence of financial responsibility of at least \$9,774*, the minimum amount needed for tuition, books, housing, and food for each academic year for three quarters plus summer maintenance. A student planning on bringing dependents with him or her will need an additional \$4,000 for a spouse and \$2,000 for each child per calendar year. Students must have additional funds for travel to and from Ohio University and for any travel within the United States. In the event that a student receives a University-funded associateship, fellowship, or scholarship upon admission, that financial assistance will be cancelled for the entire year should the newly admitted student not demonstrate English proficiency after being tested by the Ohio Program of Intensive English upon arrival at Ohio University.

The Immigration and Naturalization Service requires that international students, while in the United States, be full-time students in every quarter but the summer, and must be making reasonable progress towards the completion of their degrees. In the event that a problem should arise with enrollment, international students are required to consult with their advisors and the international student advisor.

*Amount subject to change.

General Regulations and Procedures

Registration

Details concerning the registration procedure are given in the schedule of classes which may be obtained at the Office of Registration before each registration and by specific instructions to graduate students released by the Office of Graduate Student Services.

A former graduate student who wishes to reenroll after an absence of one quarter (except summer) must request a reenrollment form one month in advance of the quarter in which he or she intends to register.

A graduate student who has attended a regional campus and who desires to enroll at the Athens campus, or vice versa, must fill out a relocation form one month in advance of registration. These forms are available from administrative offices at each of the campuses.

A student must be registered at the graduate level in any quarter in which he or she is using the facilities of the University or in which a faculty member is giving some service, such as an examination, grading a paper, reading a thesis or dissertation, giving advice on a thesis or dissertation, etc. A graduate student must also be registered in the quarter in which he or she graduates, if receiving any of the aforementioned services. A master's student must register for at least one graduate credit; a doctoral student for at least two graduate credits. This registration must be completed during the registration period indicated in the University calendar. Any exceptions must be approved by the office of the dean of the college in which the student is enrolled.

Full-Time Status

By state standards, a full-time equivalent student is one carrying 15 hours of credit per quarter. The University uses this definition also. However, at the graduate level the University uses different credit loads to define a full-time student for certain purposes. For example, for tuition and student benefits purposes full-time is defined as nine or more graduate credit hours per quarter. Other examples are apparent as one reads through this catalog.

Change Orders

A student who finds it necessary to add a course, withdraw from a course, or correct his or her registration requests a change order in the Office of Graduate Student Services. Changes that deal with programmatic content must be approved by the faculty advisor and the course in-

structor. All change orders must be returned to Graduate Student Services before the change can be made by the registrar.

Change orders will not be accepted after the fifth week of the quarter. However, under special circumstances, and with the permission of the faculty member of record, a change may be accepted up to two weeks before the end of the quarter.

Auditing

Courses that a student wishes to audit must be marked *audit* on registration forms. The fee for auditing is the same as for credit. Changes from audit to credit or from credit to audit are made by change order during the period when changes are permitted. With the permission of the instructor, a full-time student has the privilege of visiting classes in which he or she is not registered.

A student registering for *audit* is expected to attend classes consistent with the instructor's attendance policy. Failure to do so will result in removal of the audit from the student's record. If this action results in a change of fees, the official University policy on refund of registration fees will be applied.

Cancellation of Registration

A student's advisor or graduate chairman, with the approval of the dean, may request Graduate Student Services to cancel the student's registration because of poor academic performance; failure to obtain permission to take courses; falsifying signatures; final transcripts not received; or other violations of University policy.

Withdrawal from the University

Application for withdrawal is made on a withdrawal form obtained from the Office of Graduate Student Services. When the request for withdrawal has been approved by the director of the Office of Graduate Student Services, the order is referred to the Office of Student Records which grants an official withdrawal after it has been determined that all obligations to the University have been met. A refund of registration fees is made according to regulations.

A student who withdraws after the 14th day of any quarter will establish a *WP/WF* grade in each course.

A student who fails to complete the work of a course and does not complete an authorized withdrawal shall have an *F* reported for that course.

Students who have withdrawn from the University for medical reasons may not be reinstated until the Office of Graduate Student Services has received a written clearance from the Hudson Health Center.

Change of Address

Forms for reporting a change of home or Athens address are available in the Office of Graduate Student Services or in the Office of Student Records. A student is responsible for any University office communication sent to the last address reported.

Change in Program Requirements

A candidate for a degree must either (a) meet the requirements set forth in the graduate catalog at the time of the student's initial registration in a graduate degree program, or (b) should the student elect to follow requirements of a later catalog, meet those later requirements in their entirety. In the event of program changes, departments will be expected to make appropriate adjustments

to allow the student to fulfill the requirements of the initial program of study. This paragraph does not apply to students in the College of Osteopathic Medicine.

Drop Policy

Students may drop any course through the fifth week (defined for the purpose of this policy as the 35th calendar day) of a term. The student need not obtain the instructor's approval. The instructor of the class should initial the change order in order to verify being informed, but this initialing does not imply approval for the withdrawal. The completed change order must be turned in by the student to the appropriate administrative office by the end of the fifth week. After the end of the fifth week and before the last class day of the quarter, a student may petition his or her dean in writing requesting to drop under special circumstances. Earning a low grade in the course is not to be considered such a circumstance. A student who drops a course during the first two weeks (first 14 calendar days) will have no record of that course appear on the transcript. A student who drops a course after the second week will have a *WP* or *WF* assigned by the instructor at the end of the term. This policy does not change the present procedure for adding a course, nor does it change the grading procedures for students withdrawing from the University.

This policy is to be implemented for degree-seeking graduate students in the following way. During the time between registration and the end of the fifth week, a student must inform his or her instructor and his or her department graduate committee chairperson of his or her intent to drop a course, and then turn in the completed change order to the office of Graduate Student Services (OGSS). The department graduate committee chairperson and the instructor are to sign the change form indicating that they have been informed. After the fifth week of the quarter and before the last class day of the quarter, a graduate student may petition his or her department graduate committee chairperson in writing requesting a drop under special circumstances. Should the department graduate committee chairperson approve such a request, a copy of the special petition goes to the appropriate college dean for his or her approval. Poor academic performance is not sufficient grounds for dropping a course. Graduate students who are not formally part of a graduate program are covered by the drop policy as it applies to undergraduates.

Graduate Student Responsibility

The student must assume responsibility for knowing University, college, and departmental regulations and for complying with all applicable procedures. In no case will a requirement be waived or an exception granted because a student pleads ignorance of the requirement or asserts that his or her advisor or other authority did not inform the student of the requirement. While the personnel of the Office of Graduate Student Services and the student's advisor will endeavor to aid in every way possible, the responsibility for meeting requirements stated in this catalog rests with the student.

Academic Misconduct

All students, both graduate and undergraduate, must abide by the Ohio University Student Code of Conduct (*Student Handbook*, p. 49). Excerpts regarding academic misconduct are reproduced here.

Academic misconduct includes cases of cheating and plagiarism. Cheating implies dishonesty or deception in fulfilling academic requirements. A faculty member has

the authority to grant a failing grade in cases of academic misconduct as well as referring the case to the director of judiciaries.

Dishonesty occurs in instances of furnishing false information to the University by forgery, alteration, or misuse of, among other things, University documents or records, furnishing the University a written record or oral false statement, or furnishing false identification to a University official.

Plagiarism can take many forms, but in essence it involves the presentation of some other person's work as if it were the work of the presenter. This kind of deception has no place in the academic world.

Plagiarism, a form of academic misconduct, will not be tolerated within the Ohio University community. Whenever plagiarism takes place, as determined by the judgment of a faculty member, or by the procedures of the Office of University Judiciaries, serious action will be taken against the student committing plagiarism. Such action may be failure of work undertaken; failure of the course; censure by the faculty member, department, or college involved; and/or formal action by the Office of University Judiciaries, which can include either suspension or dismissal from the University.

Whenever formal action is taken with respect to plagiarism, the student(s) involved, the faculty member, the department chairman, and the student's dean should be notified of the action.

When a student is accused and judged guilty of plagiarism, and wishes to appeal the judgement, he or she may follow the usual appeal route through chairman and dean. If satisfaction is not achieved through this process, the appeal may be taken to the Student Grievance Board.

Research Using Human Subjects

The investigator in any research involving human subjects at Ohio University is expected to conduct any and all such experiments in compliance with Ohio University Policy and Procedure 19.052, pp. 1-4.

In summary, this policy applies to research investigations involving human subjects conducted by faculty, staff, or students at, or under the auspices or financial support of, Ohio University. It is intended for biomedical and behavioral research, where such research might reasonably be expected to put the physical or psychological safety or health of the human subject at risk.

The purpose of the policy is to protect the rights and personal privacy of individuals; to assure a favorable climate for the conduct of scientific inquiry; and to protect the interests of Ohio University. The policy, further, is designed to bring Ohio University policy on biomedical and behavioral research involving human subjects into compliance with the requirements set forth in the National Research Act (P.L. 93-348) and the regulations on public welfare set forth in Part 46 of Title 45 of the Code of Federal Regulations (45 CFR 46) as stated in Federal Register, January 26, 1981.

For details concerning the scope and purpose of this policy and for information concerning implementation procedures, see the *Ohio University Policy and Procedures Manual*.

Graduation and Annual Commencement Exercise

The student must apply for graduation through the Office of Student Records and pay the graduation fee by the date indicated in the University calendar. If the student

fails to meet graduation requirements in that quarter, he or she must reapply for graduation and pay the graduation reapplication fee by the date indicated in the University calendar for the quarter in which graduation requirements will be met. All work to be applied toward meeting degree requirements must be submitted no later than the last day of classes of the quarter in which the student expects to graduate. Additional deadlines to be met by students writing theses or dissertations are available in the office of the dean of the college in which the student is enrolled.

The annual commencement is held at the close of spring quarter in June. Master's and Ph.D. degree recipients from the preceding winter, fall, and summer quarters are invited to attend, along with master's degree candidates for spring quarter and spring-quarter Ph.D. candidates.

Academic costumes with the appropriate hoods are worn by candidates at the commencement exercises. Candidates will make their own arrangements for purchasing the appropriate academic costumes through the Office of Public Occasions.

Doctoral students can arrange for the purchase of a doctoral hood.

University Fees

Payment of all assessed fees at the times designated is prerequisite to official enrollment. Checks and money orders should be made payable to Ohio University in the exact amount of the fees. Postdated checks are not acceptable. Checks not paid on presentation to the bank will automatically cancel any receipts given and result in assessment of penalties. *It is important that the student retain all fee receipts.*

Ohio University reserves the right to make, without prior notice, any fee adjustments that may become necessary.

Graduate students carrying over eight hours are eligible to participate in the Monthly Payment Plan which equalized the academic year's fees into nine monthly payments.

Quarterly Fees

The comprehensive fee covers an instructional fee, a general fee, and a tuition surcharge for nonresidents. See the inside back cover of this bulletin for schedule of graduate fees.

Summer Session Fees

See the summer session bulletin and schedule of classes for complete details.

Late Registration and Late Payment Policy

If a student is permitted to register after the 14th calendar day of the quarter, following the opening day of classes, a \$50 late registration fee will be assessed unless, in the judgment of the registrar, a student's registration has been delayed due to the convenience of the University.

A late payment fee would normally not be applicable since payment is a prerequisite to registration. However, in addition to other service charges, the Bursar's Office will assess a \$20 late payment fee on all checks returned by a bank after the official payment deadline.

Miscellaneous Fees*

Admission application filing fees —	
For a degree program	\$25
For nondegree, workshops, transients	15
For nondegree to degree status	10
For change of major, or second master's	10
Late registration	50
Duplicate official forms, fee receipts, bill statements, grade reports, etc.	2
Graduate —	
Application for master's degree	23
Application for Ph.D. degree	50
Reapplication for master's or Ph.D. degree	5
Transcript of record	2

*All above fees are nonrefundable and subject to change without notice.

Insurance

Students who register for seven or more credits are required to carry student insurance or other comparable health insurance.

Refund of Fees

Withdrawal from a course by change order within the first 14 days of the quarter entitles a student to 100 percent refund if the withdrawal results in a fee change.

Official withdrawal from the University during the first 14 days of the quarter entitles the student to an 80 percent refund of the comprehensive fee.

Refunds are issued 30 days after the date of official withdrawal. If, within the first 14 days of a quarter, a student withdraws from the University before he or she has completed full payment of fees, the student is indebted to the University for the unpaid balance.

Ohio Residency

The residency rules described below are adopted by the Ohio Board of Regents on December 29, 1977, pursuant to Chapter 119. of the Revised Code, and under the authority conferred upon the Ohio Board of Regents by Section 3333.1 of the Revised Code. These rules are subject to change without notice by the Ohio Board of Regents or the Ohio General Assembly.

A. Intent and Authority

1. It is the intent of the Ohio Board of Regents in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the State of Ohio primarily for the purpose of receiving the benefit of a state-supported education while insuring that the same benefit is conferred on all bona fide domiciliaries of this state whose permanent residence and legal citizenship is in Ohio, and whose actual source of financial support is subject to Ohio taxation.

2. This rule is adopted pursuant to Chapter 119. of the Revised Code, and under the authority conferred upon the Ohio Board of Regents by Section 3333.1 of the Revised Code.

B. For Purposes of This Rule:

1. A "resident of Ohio for all other legal purposes" shall mean any person who maintains a twelve-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of the revised code; provided such person has not, within the time prescribed by this rule, declared himself or herself to

be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.

2. "Financial support" as used in this rule, shall not include grants, scholarships and awards from persons or entities which are not related to the recipient.

3. An "institution of higher education" as used in this rule shall mean any university, community college, technical institute or college, general and technical college, medical college or private medical or dental college which receives a direct subsidy from the State of Ohio.

C. General Residency for Subsidy and Tuition Surcharge Purposes

The following persons shall be classified as residents of the State of Ohio for subsidy and tuition surcharge purposes:

1. Dependent students, at least one of whose parents or legal guardian has been a resident of the State of Ohio for all other legal purposes for twelve consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.

2. Persons who have resided in Ohio for all other legal purposes for at least twelve consecutive months immediately preceding their enrollment in an institution of higher education and who are not receiving, and have not directly or indirectly received in the preceding twelve consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.

3. Persons who are living and are gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who are pursuing a part-time program of instruction at an institution of higher education.

D. Specific exceptions and circumstances

1. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.

2. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.

3. Any alien holding an immigration visa or classified as a political refugee shall be considered a resident of the state of Ohio for state subsidy and tuition surcharge purposes in the same manner as any other student.

4. No person holding a student or other temporary visa shall be eligible for Ohio residency for these purposes.

5. A dependent person classified as a resident of Ohio for these purposes shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of any one academic degree program.

6. In determining residency of a dependent student, removal of the student's parents or legal guardian from Ohio shall not, during a period of twelve months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraph (C) (1) of this rule.

7. Any person once classified as a nonresident, upon the completion of twelve consecutive months of residency in Ohio for all other legal purposes, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding twelve consecutive

months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident.

Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of information regarding the sources of a student's actual financial support to that end.

8. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.

9. A person who is transferred by his or her employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.

10. A person who has been employed as a migrant worker in the State of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

E. Procedures

Institutions of higher education charged with reporting student enrollment to the Ohio Board of Regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate residency for purposes of this rule. Such institution may require the submission of affidavits and other documentary evidence which it may deem necessary to a full and complete determination under this rule.

It is incumbent upon the student to petition for a change of residency. Petitions can be obtained in the Office of Graduate Student Services, and final determination of residency is made by the director of that office.

Financial Support

GRADUATE APPOINTMENTS

Over 800 graduate *associateships*, graduate *staff associateships*, graduate *research associateships*, and graduate *teaching associateships* are available for graduate students at Ohio University. Persons receiving these appointments are selected on the basis of merit from students who have received the baccalaureate and/or master's degrees from approved institutions and who wish to pursue work leading to graduate degrees.

Graduate contracts normally become effective the first day of each quarter, and normally end on the official closing date of the quarter. Individual graduate departments may, at their discretion, request that new departmental associates report for orientation purposes up to a week prior to the beginning of the quarter.

Graduate teaching associates carry teaching responsibilities up to a maximum of 15 hours a week for at least two quarters of the academic year and an academic course load of 9 to 18 graduate credits a quarter. Stipends range from \$3,600 to \$5,500 for three quarters (i.e., from September to June) and from \$4,400 to \$7,200 for a 12-month ap-

pointment. This appointment requires a payment of \$120 per quarter general fee. For those on a three-quarter September to June appointment, fee waivers for tuition are granted for the summer quarters preceding and following the periods covered by the appointment.

A graduate teaching associate continuing study beyond the first year is eligible for consideration for reappointment to the associateship.

Graduate research associates engage in work on research projects to a maximum of 15 hours a week and carry academic course loads of 9 to 18 graduate credits per quarter. In general, stipends, partial fees, summer fee waivers, and reappointments are the same as for a graduate teaching associate. These appointments are available mainly in the science and engineering areas.

Graduate associates fulfill academic responsibilities and service equal to a maximum of 15 hours per week and carry academic course loads of 9 to 18 graduate credits per quarter. Stipends, partial fees, summer fee waivers, and reappointments are the same as for a graduate teaching associate. The service called for by this type of appointment entails departmental administrative, teaching, and research duties which are typically performed for and under the supervision of a faculty member and which may be considered an integral part of academic apprenticeship. These appointments are available in all departments.

Graduate staff associates engage in duties varying from residence hall directorships to service in the library and University administrative offices. The academic course load is 9 to 18 graduate credits. Students work a maximum of 15 hours per week and stipend and other policies are generally the same as for other graduate-contract appointees. These appointments are not funded from academic department resources.

Appointment of graduate resident directors are made on the recommendation of the director of residence life and are available to single or married men and women. Compensation includes a furnished apartment and board for the appointee (and for his or her family, if married) and a stipend of \$3,000 plus tuition waivers. The appointment requires a payment of \$120 per quarter general fee. The graduate resident director supervises functions of the residence hall and of the undergraduate resident assistants assigned to work with him or her. The academic course load is 9 to 13 graduate credits. Application for these appointments is made by letter, and submission of the applicant's vita to the director of residence life.

Graduate students seeking continuation of stipend support must follow all departmental policies and procedures pertaining to renewal of that support. Additionally, Graduate Council guidelines state that graduate students holding graduate appointments written for an academic year must receive notice of renewal or nonrenewal of that appointment no later than the end of the spring quarter. This provision does not apply to contracts terminated early or not renewed for academic or service performance reasons. In such cases, no prior notification is required.

Graduate students holding graduate contracts written on a quarterly basis must receive notice of renewal or nonrenewal of contract at least one quarter before the end of that contract period. Graduate students holding spring quarter appointments must be notified no later than the end of the spring quarter of renewal or nonrenewal for fall quarter. This provision does not apply to contracts terminated early or not renewed for academic or service performance reasons. In such cases, no prior notification is required. Notification on summer quarter appointments can be made as early as practicable.

Time limits for Ohio University-funded associateship, fellowship, or scholarship support of graduate students seeking master's degrees shall normally be limited to a total of no more than eight quarters. Time limits for Ohio University-funded associateship, fellowship or scholarship support of graduate students seeking the Ph.D. degree shall normally be limited to a total of no more than 12 quarters beyond the master's degree (whether or not earned at Ohio University), or no more than 20 quarters beyond the bachelor's degree for students who bypass the master's degree. In no instance will University graduate support be provided to a student who has earned more than 200 hours of graduate-level credit which includes graded course credit and CR credit and credit earned for work performed prior to admission to Ohio University.

TRAINEESHIPS AND FELLOWSHIPS

Ohio University has a limited number of named fellowships such as the Hiram Roy Wilson Fellowships in Chemistry, Botany, and Zoology. In addition, the following fellowships are awarded by the associate provost for graduate and research programs, with the advice of the Graduate Council: The John Cady Graduate Fellowship, The Donald Clippinger Graduate Fellowship, The Claude Kantner Graduate Fellowship, The Kohei Miura Graduate Fellowships, and The Anthony Trisolini Graduate Fellowship. Stocker Fellowships are available in the College of Engineering and Technology. The University also participates in available federal fellowship programs.

SCHOLARSHIPS

A limited number of scholarships are available to incoming graduate students who have maintained high undergraduate averages, or to graduate students who have maintained at least a 3.0 graduate average. These scholarships require full-time study (15 graduate credits per quarter). They pay the comprehensive fee, with the exception of a \$120 general fee each quarter. Information may be obtained by contacting the graduate chairman of the student's academic department.

Questions about graduate appointments and graduate scholarships should be directed to the graduate committee in the student's department.

NOTE: There are restrictions on financial support available to students seeking two master's degrees simultaneously. Inquire at the Office of Graduate Student Services regarding eligibility for support.

LOAN ASSISTANCE

International graduate students are ineligible for financial aid administered through the Office of Student Financial Aids and Scholarships. The general pattern of eligibility with respect to citizenship is that a student must be a national of the United States. Students bearing temporary visas (or F1/J1 visas) are not eligible for further considerations.

National Direct Student Loan Program

Although a graduate student is eligible to apply for a National Direct Student Loan of up to \$2,500 per academic year and \$10,000 in the aggregate, limited NDSL funds generally do not permit awards in excess of \$1,500 per academic year or \$6,000 in the aggregate. No interest is charged while the student is in school. Repayment begins six months after termination of schooling and may extend over a ten-year period at a five-percent interest rate. The exact amount of the loan is determined by a need analysis in the Office of Student Financial Aids and Scholarships. A co-signer, preferably a parent or a guardian, is required in all cases and this loan must be secured by a promissory note. This regulation applies to all students regardless of age or marital status. Graduate students may apply for National Direct Student Loans for any three out of four quarters (summer/fall/winter/spring).

Limited provision is made for cancellation of part of the loan if the student becomes a teacher in an area having a high concentration of low-income students. The borrower may defer payment of the loan plus interest while maintaining at least half-time student status at an institution of higher education or at a comparable institution outside of the United States if approved by the Commissioner of Education. Deferment may also be granted for up to three years if the borrower is on full-time active duty as a member of the Armed Forces or is in Peace Corps service.

All students must apply during the month of January for first-priority consideration. For additional information concerning the NDSL Program and Financial Aid Form (FAF), write Director of Student Financial Aids and Scholarships, Chubb Hall, Ohio University, Athens, Ohio 45701.

Guaranteed Student Loan Program

Graduate students are eligible to borrow up to \$5,000 per academic year with an aggregate (undergraduate/graduate) loan limit of \$25,000 under the federally subsidized loan program sponsored by various lending agencies. Often the nine percent interest is paid by the federal government, while the student is enrolled. It is also available without this benefit. Repayment begins six months after the student completes his or her course of study or leaves school; repayment periods vary in length from one to ten years, depending upon the loan amount.

An application may be obtained from banks, savings and loan associations, credit unions, pension funds, and insurance companies which participate in this loan program. Ohio University does not have application forms for Guaranteed Student Loans. Loans are made at the discretion of the lending agency.

Completed applications should be forwarded to Loan Department, Office of Student Financial Aids and Scholarships, Room B, Chubb Hall, Ohio University, Athens, Ohio 45701, following which they will be certified for enrollment and returned to the lending agency. Because new regulations are expected, students should check their lending agencies for current information.

COLLEGE WORK-STUDY

College Work-Study is a part-time employment program awarded on the basis of demonstration of financial need as determined by analysis of the Financial Aid Form (FAF). This form, available upon request from the Office of Student Financial Aids and Scholarships, should be filed dur-

ing the month of January for first-priority consideration. Job assignments are made based on the student's interest, major, etc. whenever possible. The number of hours that a student is permitted to work is determined by the amount of the award. Students might work between 8-15 hours per week and will receive a paycheck every two weeks for actual hours worked.

Unless the applicant is classified as an independent student, according to federal regulations, enrollment at the graduate level does not, in and of itself, alter the responsibility of the institution to continue to take into reasonable consideration the resources of the parents. Likewise, if a student is married, the spouse's income must be considered as a prime source of support for the student's educational costs.

For additional information concerning the College Work-Study Program and graduate student financial aid applications, write Director of Student Financial Aids and Scholarships, Chubb Hall, Ohio University, Athens, Ohio 45701 or call 614/594-5471.

Degree Requirements

STANDARDS OF WORK

Conferral of either the master's or Ph.D. degree requires at least a B (3.00) grade-point average. The grade-point average in formal coursework will be computed separately from that in research, thesis, and dissertation credits to determine eligibility for graduation. At least a B (3.00) grade-point average is required in each category. No grade below C (2.00) can be used to satisfy any degree requirement. A department may establish more rigorous standards. All graduate students are expected to maintain at least an overall B (3.00) grade-point average on a continuing basis. Should any student achieve less than an overall B (3.00) grade-point average, the office of the dean of the college in which the student is enrolled will solicit a written statement from that student's departmental Graduate Committee to justify continuation of the student in the program.

GRADING SYSTEM

Academic work at Ohio University is evaluated on a 12-point grading scale. A grade of A equals 4.00; A- equals 3.67; B+ equals 3.33; B equals 3.00; B- equals 2.67; C+ equals 2.33; C equals 2.00; C- equals 1.67; D+ equals 1.33; D equals 1.00; D- equals 0.67, and F equals 0.00.

In addition to letter grades, the following grades may also be recorded. Credit (CR) is usually awarded for satisfactory completion of seminars, research projects, and thesis or dissertation credit. A student may receive a grade of Progress (PR) in courses which are not yet complete or which will extend over more than one quarter. Grades of CR or PR are not used in computing the student's grade-point average. An Incomplete (I) indicates that the student has made progress in a course but has not finished the work required to receive a letter grade. An I symbol is not counted in quarter hours attempted, hours earned, or quality points until a letter grade is reported. If neither a letter grade nor notification from the instructor for an ex-

tension of time is received by the Office of Student Records, the I symbol reverts to an F letter grade six weeks into the next quarter the student is enrolled. Requests from the instructor for extension of time beyond six weeks cannot exceed the end of the next quarter enrolled. Any remaining I symbols will be calculated as F in determining eligibility for graduation.

Determination of the appropriate use of letter grades, CR, PR, or I is made by the department and is recorded in the Office of Student Records.

A grade of NR means that the instructor has not submitted a grade, or that there has been a processing error. The student should check with the instructor; if a grade was in fact submitted, the student should go to the Office of Student Records to learn what is necessary to clear up the problem.

An *administrative incomplete (I*)* is given by the Office of Student Records when a student fails to drop officially a course for which he or she has registered. Until removed, an administrative incomplete is computed as an F in calculation of the grade-point average.

THE MASTER'S DEGREE

A minimum of 45 graduate credits is required for conferral of the master's degree. A student may not have more than 12 credits with a CR grade exclusive of research and thesis hours applied to his or her minimal credit requirements. Additional credits may be required by individual departments. A program of study approved by the student's advisor and by the departmental graduate committee should be developed early in the student's first graduate quarter to insure that all degree requirements are satisfied in the most efficient manner possible. Since graduate work implies advanced study and some degree of specialization, a certain amount of undergraduate preparation in a subject or field of study is presupposed before graduate study may be undertaken in that subject or field. In most departments a minimum of 27 undergraduate credits is required in the major area. The student is referred to the requirements listed by departments. The nature of Ohio University's master's degree programs may make it appropriate for students enrolled in certain programs to spend a given period of time in residence on the Athens campus. It is the student's responsibility to ascertain whether a period of residence is required in the student's major field and to plan a program of study accordingly by consulting with his or her advisor and departmental graduate committee. A comprehensive examination may be required. The nature and timing of the examination is determined by the department.

Thesis Requirement

A student in a thesis program prepares the thesis under the guidance of his or her thesis director on a subject in the field of his or her major work.* The thesis provides an opportunity for the student to formulate and express the results of research and study. The thesis requirement may be met by the presentation of the results of a creative activity in literature, music, fine arts, or industrial arts, together with a written essay indicating the purpose, procedure, problems, and bibliography involved in the work. Each department will prescribe the specific style manual to be followed by its students. *The student and his or her thesis director are responsible for the maintenance of accepted standards of grammar, sentence structure, punctua-*

tion, form, and scholarly style in the thesis. A pamphlet, "Format for the Presentation of Theses and Dissertations," is available in the college dean's offices. This booklet contains regulations regarding type, margins, quality of paper, and other aspects, as well as detailed directions for submitting the finished thesis. Every student writing a thesis must obtain from his or her dean's office the current "Format" and the printed list of quarterly deadlines for graduation.

*See Guidelines for Sponsored Research section.

Oral Thesis Examination

An oral thesis examination is required of all students in a thesis program. The examining committee is composed of the director of the thesis as chairman and two or more additional faculty members. The student and the thesis director, in consultation with members of the examining committee, set a time and place for the examination. Final copies of the thesis must be presented to members of the student's examination committee *at least two weeks* before the date of the oral examination to allow adequate review of the manuscript. Results of the examination are reported to the Office of Graduate Student Services and the Office of Student Records as soon as final approval of the thesis is given.

Nonthesis Option

Several departments have master's degree programs with nonthesis options. In consultation with his or her advisor, the student should carefully consider career goals in deciding between a thesis or nonthesis option. The student should be aware that many academic areas regard a nonthesis master's program as a terminal degree program.

Transfer of Credit

A maximum of 12 quarter hours of graduate credit may be transferred from an accredited university to a master's degree program at Ohio University providing the following conditions are met: The credits to be transferred must have been designated as graduate credit at the institution where taken. The credits must be letter graded B or better and must have been earned in the past five years. The credits must be applicable toward an advanced degree at the institution where taken and must have been earned in courses taught by members of that institution's graduate faculty. Credit for courses taken by correspondence is not accepted. Any request for transfer of credit must be recommended by the student's advisor and departmental graduate committee before final review and acceptance by his or her dean's office. No letter grades will appear on the transcript for transferred courses nor will they be calculated in a student's grade-point average.

Time Limit for the Master's Program

The maximum time allowed between the date when a student first registers for graduate study and the date when the requirements for the master's degree are completed is six calendar years. Students who do not complete their requirements within the six-year period may be permitted to continue in graduate study only if exceptional circumstances are associated with the delay in progress.

The dean of the student's college may grant a one-quarter, one-time extension. If circumstances warrant an extension beyond one quarter, it must be approved by the Graduate Council upon the recommendation of the departmental graduate committee.

Second Master's Degrees

A student who wishes to earn a second master's degree at Ohio University must make formal application for admission to the department in which the second master's degree is sought and pay an application fee of \$10. In addition, the student must prepare a program of study for each master's degree by listing the course number, name, and number of credits. No more than 12 credits from one master's degree program may be used in satisfaction of degree requirements in a second master's degree program. Each program of study must be signed by the departmental graduate committees in both departments in which master's degrees will be earned. The student must then submit the programs of study to the Office of Graduate Student Services for final approval. *Any admission status given in a second master's degree program must be regarded as provisional until the programs of study are approved.*

NOTE: There are restrictions on financial support for students seeking second master's degrees. Inquire within the Office of Graduate Student Services regarding eligibility for continued support.

THE DOCTOR OF PHILOSOPHY DEGREE

The Ph.D. is granted on the basis of evidence that the candidate has achieved a high level of scholarship and proficiency in research rather than solely on the basis of successful completion of a prescribed amount of coursework. The student's competence and ability to work independently and to write creatively are established by qualifying and comprehensive examinations and the quality of a dissertation submitted as an account of his or her original research.

Program of Study and Advisory Committee

The graduate committee of the student's department will assign an advisor and an advisory committee, who must approve the proposed program of study for the degree. Graduate work completed at another university will be considered by the departmental graduate committee and the student's advisory committee in the development of the student's program of study.

Typically, when the dissertation proposal is nearing approval, the departmental graduate committee will forward to the office of the dean of the college in which the student is enrolled a recommendation for appointment of a dean's representative, together with the names of other dissertation committee members and the title of the student's dissertation. The committee shall consist of at least three members representing the range of content in the student's program of study, in addition to the representative from the dean's office.

Comprehensive Examination

When coursework is virtually completed, and upon the recommendation of the advisory committee, the student takes a comprehensive examination, which is given for the purpose of establishing his or her mastery of the fields of specialization and readiness for advanced research. The results of the examination must be reported within *one week* to the office of the dean of the college in which the student is enrolled, on a form provided by the dean's office.

A copy of this form should be sent to the Office of Graduate Student Services to be included in the student's official academic file.

Scholarly Discipline Requirement

The Ph.D. degree by definition is research-oriented, and each department shall determine the auxiliary research competencies needed by candidates for the Ph.D. degree. Competence will be determined by standards and methods established by the individual departments. Each student who expects to demonstrate proficiency in one of the scholarly disciplines in which examinations are arranged by his or her dean's office (e.g., statistics, computer science, foreign language, etc.) must file an appropriate *Intent Form*. These forms are available from and should be filed with the office of the dean of the college in which the student is enrolled. The student must be registered for a minimum of two hours in the quarter in which the examination is taken.

The French, German, Russian, and Spanish proficiency examinations of the Educational Testing Service are given at Ohio University several times during the year. Information and application forms may be obtained at the office of the student's dean, where the \$5 nonrefundable registration fee is paid.

Academic Residency Requirement

Normally, at least three academic quarters of the doctoral program shall be in continuous residence on the Athens campus of Ohio University in an institutional full-time status (registration for 15 graduate credits). Students who receive Ohio University stipend support are considered to have instructional full-time status by registering for nine or more graduate credits. For some programs the residency requirement can be fulfilled a third way. A student not receiving stipend support may be granted the option of completing residency requirements for the Ph.D. by enrolling in 9 quarter hours of coursework per quarter for three consecutive quarters if concurrently employed in a full-time professional position, defined as one in which the experience contributes directly to the student's program. This option must be approved by the student's advisor, the department/school graduate committee, and the department chairperson/school director. A written justification of how the experience gained in the position is directly and educationally related to the student's professional goals and the goals of the program and why this experience alone or combined with other planned experiences should be used to satisfy residency is required. The written justification must be submitted to the student's advisor prior to consideration of the request. The continuous residence requirement applies to the period of graduate study following the completion of the master's degree or the completion of at least 45 graduate credits.

Admission to Candidacy

Admission to candidacy is achieved after the student has completed the following steps: (1) formation of the dissertation committee (including the dean's representative) which may be the same as the student's advisory committee; (2) approval of the research proposal by this committee; (3) successful completion of the comprehensive examination; and (4) satisfaction of all required scholarly disciplines.

Forms for indicating completion of the above are available from and are filed in the office of the dean of the college in which the student is enrolled. A student will not be permitted to schedule the oral examination of the dissertation until all requirements for admission to candidacy have been met.

A copy of the student's admission-to-candidacy letter should be sent to the Office of Graduate Student Services for inclusion in the student's official file.

Dissertation

A dissertation, which is the scholarly account of research in the new area of knowledge, is submitted by each candidate.* Each department will prescribe the specific style manual to be followed by its students. A pamphlet, "Format for the Presentation of Theses and Dissertations," is available in the deans' offices. This booklet contains regulations regarding type, margins, quality of paper, abstract, and other aspects, as well as detailed directions for submitting the finished dissertation to the office of the dean of the college in which the student is enrolled. Every degree candidate must obtain from his or her dean's office the current "Format" and the list of quarterly deadlines for graduation.

One copy of the dissertation is submitted to University Microfilms International for editing and microfilming and will be made available for use by interlibrary loan. A copy of the dissertation abstract is published in *Dissertation Abstracts* by University Microfilms International.

A copy of the dissertation abstract should be sent to the Office of Graduate Student Services for inclusion in the student's official file.

*See Guidelines for Sponsored Research section.

Copyright

Dissertations can be copyrighted at the time the manuscripts are sent to University Microfilms International. Arrangements can be made through the library for this service. Students should be aware that under current copyright procedures, microfilming by University Microfilms International constitutes publication. The author may lose the ability to obtain a copyright if the dissertation is not copyrighted at the time of submission to his or her dean's office. For further information, contact the Office of the Director, 512 Alden Library.

Oral Dissertation Examination

An oral dissertation examination is required of all candidates for the Ph.D. degree. The examining committee shall be composed of the student's entire dissertation committee (including the representative of the dean of the college in which the student is enrolled), unless otherwise specified by the associate provost for graduate and research programs. Final copies of the dissertation must be presented to members of the examining committee at least two weeks before the date of the oral examination to allow adequate time for review. The final arrangements for the examination shall be completed through the office of the dean of the college in which the student is enrolled at least 10 days prior to the examination. Details of the examination, including time and place, will be sent to the examiners and to the student from his or her dean's office.

The Office of Graduate Student Services should be notified of the date that the student passed the oral examination. This information should be included in the student's official file.

Time Limit for Ph.D. Program

The doctoral program of study must be completed within seven calendar years of the date of its initiation as determined by the individual department and recorded in the Office of Graduate Student Services.

Students who do not complete requirements for the degree within the given period may be permitted to continue in graduate study only if exceptional circumstances are associated with the delay in progress.

The dean of the student's college may grant a one-quarter, one-time extension. If circumstances warrant an extension beyond one quarter, it must be approved by the Graduate Council upon the recommendation of the departmental graduate committee.

GUIDELINES FOR SPONSORED RESEARCH

The University does not accept theses or dissertations containing material developed as part of a research project if the thesis or dissertation is restricted from publication. Publication, for this purpose, includes depositing the manuscript with the office of the dean of the college in which the student is enrolled, the department, and cataloging by the Alden Library, microfilming and distribution by University Microfilms International.

However, upon the student's written request to his or her dean's office, publication may be delayed up to a maximum of 12 months if, in the judgment of the office, the data upon which the thesis or dissertation is based are proprietary (i.e., legally protected as to copyright, patent secrecy, process of manufacture, etc.) and not available in the public domain. Request for delay must be submitted by the student, with the formal approval of the student's advisor, at least one academic quarter prior to the normal date of publication of the thesis or dissertation.

For further information, consult Ohio University Policy and Procedure #19.051.

Graduate Programs

Graduate degrees are granted in the following areas:

College of Arts and Sciences

- * Botany
- * Cellular and Molecular Biology¹
- Chemistry
- Economics
- * English Language and Literature
- Environmental Studies
- Geography
- Geological Sciences
- * History
- Liberal Studies
- Linguistics
- * Mathematics
- Modern Languages (French, German, Spanish)
- Philosophy
- * Physics and Astronomy
- Political Science
- * Psychology (Clinical, Experimental, School)
- Social Sciences
- Sociology
- * Zoological and Biomedical Sciences

College of Business Administration

Business Administration

College of Communication

- * Interpersonal Communication (Communication Theory, Cross-Cultural Communication, Organizational Communication, Rhetoric and Public Address, Information Systems)
- Journalism
- * Mass Communication: Journalism, Telecommunications
- Telecommunications

College of Education

- * Applied Behavioral Sciences and Education Leadership (Community Counseling, Educational Administration, Educational Research and Evaluation, Guidance and Counseling, Higher Education, Student Personnel Services)
- * Curriculum and Instruction (Economic Education, Elementary School Education, Elementary School Supervision, Mathematics Teaching in the Secondary School, Middle School Education, Reading Supervision, Secondary School Education, Secondary School Supervision, Special Education-Learning Disabilities, Special Education-Educable Mentally Retarded, Industrial Arts Education)

College of Engineering and Technology

- * Chemical Engineering
- Civil Engineering
- * Electrical and Computer Engineering
- Industrial and Systems Engineering
- Mechanical Engineering

College of Fine Arts

- Art (Art Education, Art History, Ceramics, Painting, Photography, Printmaking, Sculpture)
- * Comparative Arts
- Film
- Music (Composition, Education, History and Literature, Performance, Theory)
- Theater (Professional Actors Training Program, Professional Production Design Program, Professional Directors Training Program, History and Criticism, Playwriting)

College of Health and Human Services

- Health and Sport Sciences (Athletic Training, Exercise Physiology, Health Services Administration, Physical Education and Sport, Recreation Studies, Sports Administration)
- * Hearing and Speech Sciences (Audiology, Speech Pathology)
- Home Economics (Child Development and Family Life, Foods and Nutrition, Home Education, Textiles and Clothing)

International Affairs

- (Administrative Studies, African Studies, Development Studies, Latin American Studies, Southeast Asian Studies)

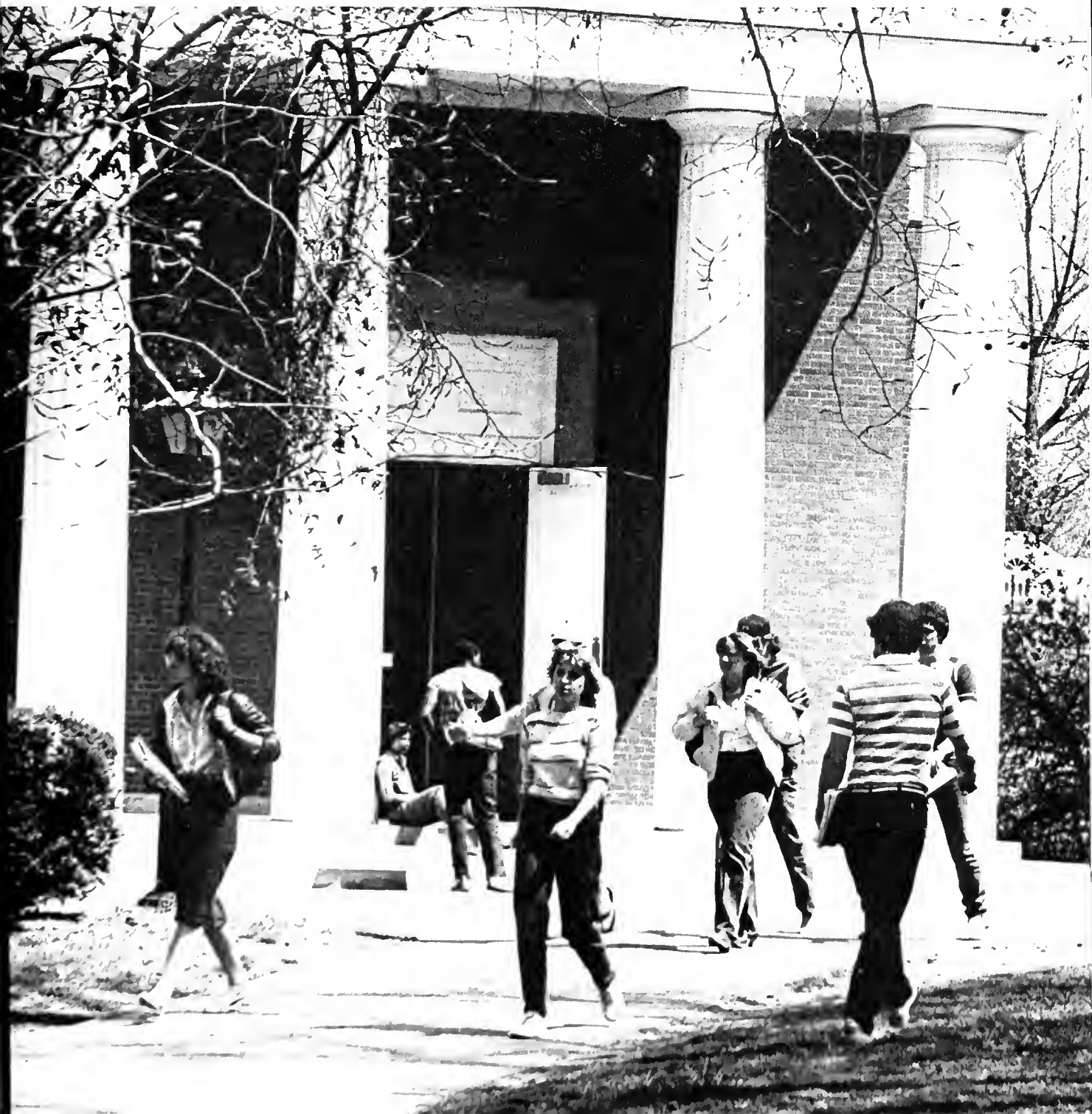
Interdisciplinary Programs

- * Individual Interdisciplinary Programs

*Ph.D. granting areas

¹Degree obtained in botany, chemistry, or zoological sciences.

Courses of Instruction



Courses of Instruction

The programs and requirements described in this bulletin are necessarily subject to change without notice at the discretion of Ohio University.

Catalog Number

The catalog number indicates the student classification for which the course is intended. Courses numbered 500-699 are for master's level students; courses numbered 700-899 are for post-master's or doctoral level students. No graduate credit is awarded for any work taken below the 500 level.

The italicized information following some course descriptions gives the following information: faculty name; quarter offered (*F* - fall, *W* - winter, *Sp* - spring, *Su* - summer); frequency with which the course is offered (*A* - alternate years, *Y* - yearly, *D* - on demand); last year in which the course was offered. For example, *Staff; Sp; D, 1979* means the course is taught by various members of the department on demand during spring quarter only and was last offered in 1979.

Credit and Prerequisites

Credit for a course is indicated by the number or numbers in parentheses following the course title.

In a course carrying variable credit the credit may be expressed thus: (1-4), indicating that one credit is the minimum and four credits the maximum amount allowed for the course in one quarter. A student may enroll for a course with variable credit any number of times and for any number of credits, within the quarter limit, provided the total registration for the course does not exceed the maximum credit indicated in the course description. Departments may limit the number of hours counted in satisfaction of degree requirements.

Course prerequisites are indicated at the beginning of course descriptions following the abbreviation, "Prereq:". A student who completes an advanced course may not subsequently enroll in a prerequisite course for credit.

Class Schedule

A schedule of classes is available each quarter from the Office of Registration.

Further Information

For further information on any of the graduate programs, please write to the department graduate committee.

AFRICAN STUDIES

(See International Affairs)

AFRO-AMERICAN STUDIES

Although Afro-American Studies does not offer an academic program leading to a graduate degree, it does offer several graduate courses. The courses provide a broad interdisciplinary approach to the black experience, and include the social sciences, education and psychology, and the arts and humanities.

502 The Black Child (5)

Prereq: grad rank. Designed to do in-depth study of black child — impact and effects of growing up in America. Specifically, course will deal with effects and role of school and family in creative adjustment of black child in predominantly white society. Primarily designed for prospective teachers, social workers, parents.

Childs.

530 Social Theories of Underdevelopment (5)

Prereq: grad rank. Systematic review of problems of social change in developing areas from multidisciplinary point of view. Attention given to problems of agrarian reforms, urbanization as social process, regional disparities within framework of single nation state inter alia. Comparative analysis of problems of social development undertaken topologically.

Rhodes.

531 Race and Ethnicity (5)

Prereq: grad rank. Review of various theories of race. Critique of diverse definitions of ethnic groups. Attention given to problem of ethnicity in international arena. Cross national comparisons made of ethnic processes in developing countries, vis a vis ethnic processes in developed world.

Rhodes.

532 Problems of National Oppression (4)

Prereq: grad rank. Comparative study of many varieties of national oppression among national minorities in United States and in varied Third World countries. Different modes of national oppression (racial, religious, linguistic, territorial, etc.) duly aired. Attention given to notion of right of nations and peoples to self-determination, to diverse criteria for acceptability, and to forms of exercising such rights.

Rhodes.

582 The Black Family (5)

Prereq: grad rank. In-depth study of black family approached sociologically. Examination of institutional family, historical family, present-day family, and future family.

Childs.

691 Professional Seminar (1-15)

Prereq: grad rank and perm of instructor. For student who wishes class which involves contact hrs and in which student will participate in class discussion and perform required class assignments. If, under this course number, the student enrolls in an upperdivision undergraduate course, student will be required to do assignments beyond those required of undergraduates. Students will write papers to present to class for discussion.

Staff

697 Independent Research (1-15)

Prereq: grad rank and perm of instructor. For students desiring to pursue independent research projects under supervision of a faculty member and resulting in term paper or equiv. Usually a sequel to previous subject-matter course.

Staff

ANTHROPOLOGY

No graduate degree in anthropology is offered; however, some graduate courses are offered each quarter. These contribute particularly to degree programs in Southeast Asian studies, African studies, Latin American studies, and sociology, as well as a wide range of other programs, such as communications, comparative arts, creative writing, dance, ecology, economics, education, film, foods and nutrition, geography, linguistics, philosophy and political science.

550 Economic Anthropology (5)

Prereq: 571 and perm. Survey of economic arrangements found in various types of cultural systems with emphasis on application of anthropological theory and method for understanding particular systems.

Saxe; A; D.

551 Political Anthropology (5)

Prereq: 571 and perm. Cross-cultural survey of political arrangements with emphasis on application of anthropological method and theory to political problems.

Saxe, Rodgers, Staff; D.

552 Archaeological Anthropology (5)

Prereq: 571 and perm. Introduction to the "new archaeology" in which goals, theory, and method are directed toward reconstruction of extinct socio-cultural systems rather than toward time-space distribution of archaeological materials.

Saxe; D.

555 Medical Anthropology (5)

Prereq: 571. Non-western medical systems and theories of health and disease causation; social basis for diagnosis and cure; curing rituals; symbolism of health and illness. Ecological factors in health and nonhealth; systematic connections between health or illness and both way of life and environmental situation.

Rodgers, Wood.

557 Anthropology of Religion (5)

Prereq: 571 and perm. Survey of various aspects of religion in their cultural setting with emphasis on use of anthropological theories for an objective understanding of religion.

Wood, Rodgers; 1980.

558 Women: A Cross-Cultural Survey (5)

Prereq: 571 and perm. Cross-cultural survey of life conditions of women with emphasis on factors determining role and status of women in various types of cultures.

Bausch; A, D.

560 Kinship (5)

Prereq: 571. Theoretical framework and ethnographic work on kinship systems of various world cultures; non-western family systems; kinship terminology; social change in kinship systems.

Rodgers.

566 Cultures of the Americas (5)

Prereq: 571 and perm. Survey of cultural diversity present in South, North, or Meso-America with emphasis on application of anthropological method and theory to understanding of particular socio-cultural systems.

Wood, Rodgers.

571 Ethnology (5)

Prereq: perm. Cross-cultural analysis of structure, process, and adaptation in various cultural systems; includes kinship, ideology, economics, politics, and environmental relationships.

Wood, Rodgers; F, Su; Y, D; 1982.

572 History of Anthropological Thought (5)

Prereq: 571 and perm. In-depth examination of schools of anthropology as they have developed within various subfields at different times and places.

Staff; D.

575 Culture and Personality (5)

Prereq: 571 or perm. Interrelations between personality systems and cultural systems.

Wood; A.

576 Culture Contact and Change (5)

Prereq: 571 and perm. Impacts of cultures upon one another: immediate and subsequent cultural adaptations. Emphasis on Southeast Asia, Latin America, Africa.

Wood; A.

577 Peasant Communities (5)

Prereq: 571 and perm. Focuses upon folk component of state societies.

Wood; A.

578 Cultural Ecology (5)

Prereq: 571 and perm. Analysis of mutual and reciprocal relations between socio-cultural systems and other systems in their environment; ecosystems and biotic communities in which human populations are included.

Saxe; A, D.

581 Cultures of Sub-Saharan Africa (5)

Prereq: 571 and perm. Survey of cultural diversity in sub-Saharan Africa with emphasis on application of anthropological theory and method to understanding of particular socio-cultural systems.

Saxe; W, D; 1980.

585 Cultures of Southeast Asia (5)

Prereq: 571 and perm. Survey of cultural systems of island and mainland Southeast Asia.

Rodgers, Wood; F; Y.

586 Problems in Southeast Asia Anthropology (5)

Prereq: 571 and perm. Selected topics of current theoretical concern relating to Southeast Asia.

Wood, Rodgers; Sp; A, D.

587 Cultures of Oceania (5)

Prereq: 571 and perm. Anthropological survey of Melanesia, Polynesia, and Micronesia.

Bausch, Saxe; A, D.

591 Primate Social Organization (5)

Prereq: perm. Introduction to primate ethology, with reference to development of human cultural behavior.

Koertvelyessy; A.

592 Human Evolution (5)

Prereq: perm. In-depth examination of evidence for biological macroevolution of humans. Topics include fossil record for hominoid and hominid forms, speciation, interpretation of fossil record, evolution of crucial anatomical areas, and fit between paleontological and immunological approaches to evolution.

Koertvelyessy; A.

594 Seminar in Anthropology (4-6)

Prereq: 571 and perm. Selected topics.

Staff; Y, D; 1980.

599 Readings in Anthropology (1-3, max 8)

Prereq: 571 or perm. Supervised readings in all areas of anthropology. Make individual arrangements with particular faculty member in advance.

Staff; F, W, Sp, Su; Y.

ART

Art Education

Art History

Ceramics

Glass

Painting

Photography

Printmaking

Sculpture

Inter-Area

PROGRAMS OF STUDY

The School of Art offers programs of study leading to the master of fine arts (M.F.A.) degree in ceramics, painting, photography, printmaking, sculpture, art history, or art history/studio. The master of arts (M.A.) degree is offered in art education or photography.

GENERAL APPLICATION PROCEDURES (all programs)

An applicant must have a bachelor's degree from an accredited institution and a grade-point average of at least 2.5. Each applicant must submit completed application forms, fee, and two official transcripts from each institution attended to the Office of Graduate Student Services, Wilson Hall, Ohio University, Athens, Ohio 45701. Each applicant must also submit three letters of recommendation to the Graduate Program Chairman, School of Art, Ohio University, Athens, Ohio 45701. Final dates for applications are: March 1 (summer and fall quarters), November 1 (winter quarter), and February 1 (spring quarter). Application materials should be sent well in advance of due dates; only complete applications will be considered. Evaluation and selection of students and graduate appointees will be made as soon as is practicable and applicants will be informed of their status promptly. Late applications will be considered if openings remain in programs.

SLIDE REQUIREMENT

Applicants planning to concentrate in art education, art history studio, ceramics, painting, M.A. photography, printmaking, or sculpture must submit not more than 20 slides in a plastic, page-size sheet to the Graduate Program Chairman, School of Art, Ohio University, Athens, Ohio 45701. Each slide is to be marked with the applicant's name, medium used, size, indication of top, and date executed. Slides are to be accompanied by a corresponding list which includes medium used, size, and date executed. Applicants are to include self-addressed, postage-paid envelopes for return of slides.

PHOTOGRAPHY PORTFOLIO REQUIREMENT

An applicant to the M.F.A. program in photography must submit a portfolio of no more than 15 prints (slides are acceptable) chosen to define the applicant's interests and capabilities to the Graduate Program Chairman, School of Art, Ohio University, Athens, Ohio 45701. A letter indicating for which degree program application is being made and return postage are to be included. Portfolios will be returned after applications have been processed. (See preceding for M.A. slide requirement.)

ART HISTORY/STUDIO WRITTEN PAPER REQUIREMENT

An applicant planning to concentrate in art history/studio must submit a research paper, report, or some other specimen of formal writing demonstrating written language skills. Applicants must also indicate on the application form, line 10, in which specific studio area they wish to concentrate (ceramics, painting, photography, printmaking, or sculpture).

FINANCIAL AIDS

The School of Art awards approximately 30 teaching associateships and 30 quarters of full-tuition scholarships each year. Selection is by competition and is based upon available openings and funding. Both beginning graduate students and continuing graduate students are eligible for graduate appointments. *Applicants wishing to be considered for associateships or scholarships are to mark items 4 and or 5 in the section of the application form designated "Application for Graduate Appointment."*

Applicants who wish to apply for National Direct Student Loans, Work-Study, or any other form of financial aid are to write to the Director of Student Financial Aids and Scholarships, Chubb Hall, Ohio University, Athens, Ohio 45701 for further information and application forms. Applications must be made before March 1.

FURTHER INFORMATION

For further information, write to the Graduate Program Chairman, School of Art, Ohio University, Athens, Ohio 45701

DEGREE REQUIREMENTS

A normal, full-time academic load for a graduate student is 15 to 18 credit hours per quarter.

Art Education

The graduate program leading to the M.A. degree in art education requires the completion of at least 45 quarter hours of graduate coursework including studio, 12 hours of art history, and 12 hours of art education for applicants having teaching certificates. The remainder of the program consists of electives including studio courses.

Art History

The graduate program leading to the M.F.A. degree in art history requires the completion of at least 90 hours of graduate coursework including the major sequence in art history, 10 hours of a studio area, and a written thesis (10 hours). Proof of reading competence in French or German is required; standard language examinations or coursework without credit may be used.

Art History/Studio

The graduate program leading to the M.F.A. degree in art history studio requires the completion of at least 90 hours of graduate coursework including 36 hours in art history, 36 hours in a major studio area, six hours of seminar, five hours of studio thesis, five hours of art history practicum, and a demonstration of effective use of art history methodology. To be recommended as a degree candidate a student must submit work for review by a faculty committee at the end of the second quarter of study. A year's residency is required after candidacy is attained. The program concludes with a thesis exhibition and final thesis review.

Ceramics, Painting, Printmaking, or Sculpture

The graduate program leading to the M.F.A. degree in a studio area requires the completion of at least 90 quarter hours of graduate coursework including 36 hours in a major studio area, area seminar, interdisciplinary seminar (601), 12 hours of art history, and five hours of studio thesis. To be recommended as a degree candidate a student must submit work for review by a faculty committee at the end of the second quarter of study. A year's residency is required after candidacy is attained. The program concludes with a thesis exhibition and final thesis review.

Photography, M.A.

The graduate program leading to the M.A. degree in applied photography requires the completion of at least 45 quarter hours of graduate coursework. Students will elect to concentrate in photographic communication (photojournalism, multi-media, and documentary) or photographic illustration (product, editorial, and architectural). Requirements for concentration in photographic communication are 591A; color printing (five hours); a thesis project or presentation (five hours); 592A, B, and C; and electives. A portfolio review will be held at the end of the first quarter of study. Requirements for concentration in photographic illustration are 591A; color printing (five hours); a thesis project or presentation (five hours); 593A, B, and C; and electives. A portfolio review will be held at the end of the first quarter of study.

Photography, M.F.A.

The graduate program leading to the M.F.A. degree in photographic arts requires the completion of at least 90 quarter hours of graduate coursework including 591A, 594A, 10 hours of nonphotographic studio art, 690 (area seminar), 601 (interdisciplinary seminar), History of Photography (12 hours), eight hours of art history, and a 10-hour thesis project. The remainder of the program consists of individualized study arranged by the student and an advisor. To be recommended as a degree candidate a student must submit work for review by a faculty committee at the end of the second quarter of study. A year's residency is required after candidacy is attained. During the next-to-last quarter a thesis project is to be done, leading to the required thesis exhibition to be presented during the final quarter.

Art Education

560 Studies in Art Education (3)

Critical study of historical and contemporary philosophy and investigation into related research. Individual planning for research projects.

Staff; F; Y.

561 Research in Art Education (3)

Prereq: 560. Original research under direction of advisor.

Staff; W; Y.

562 Research in Art Education (3)

Prereq: 561. Continuation of 561.

Staff; Sp; Y.

563 Proseminar in Art Education (3)

Presentation and evaluation of student research projects.

Staff; Sp; Y.

Art History

520 Greek Art (4)

Art of ancient Greece.

Schwindler; D.

521 Roman Art (4)

Art of ancient Rome.

Schwindler; W; Y.

522 Medieval Art (4)

Art of Europe from age of Constantine to art of Giotto.

Staff; W; Y.

523 Italian Renaissance Art (4)

Art of 15th century Italy.

Hunt; F; Y.

524 Northern Renaissance Art (4)

Art of Northern Europe in 15th and 16th centuries.

Hunt; Sp; Y.

525 Art of High Renaissance and Mannerism (4)

Art of 16th century Italy.

Hunt; D.

526 Baroque and Rococo Art (4)

Art of 17th and 18th century Europe.

Hunt; F; Y.

527 Art of 19th Century (4)

European art from French Revolution to 1900.

Staff; F; A.

528 Modern Art (4)

Specific movements and artists since 1900.

Staff; Sp; A.

529 The Arts of the United States (4)

Art in the U.S. from the Colonial period.

Schwindler; Sp; A.

530 The Arts of the Orient (4)

Art of India, China, Japan.

Schwindler; F; A.

531 Pre-Columbian Art (4)

Preconquest art of Mexico, Central, and South America.

Perani; W; A.

532 African Art (4)

Traditional art of West and Central Africa.

Perani; W; A.

533 Near Eastern Art (4)

Art of Egypt, Mesopotamia, Assyria, and Babylonia.

Staff; Sp; A.

537 History of Photography (4)

History and development of photography as art, science, and industry. Leading photographers and their contributions to development of the art.

Gassan; F; Y.

538 History of Photography (4)

Continuation of 537.

Gassan; W; Y.

539 History of Photography (4)

Continuation of 537 and 538.

Gassan; Sp; Y.

540 Art and Ideas in Painting (4)

Staff; Y.

550 Seminar in Art History (3)

Intensive study of projects of limited scope.

Staff; D.

560 Art Historiography (4)

Staff; Sp.

780 Individual Problems (1-6)

Staff; F, W, Sp, Su; Y.

781 Individual Reading (1-3)

Staff; F, W, Sp, Su; Y.

800 Art History Thesis (1-15)

Staff; F, W, Sp, Su; Y.

Ceramics

515 Ceramics (3-6)

Staff; F, W, Sp, Su; Y.

516 Ceramics (3-6)

Prereq: 515.

Staff; F, W, Sp, Su; Y.

610 Ceramics Seminar (3)

Lectures, discussions, field trips, slide and film presentations dealing with contemporary issues in ceramic art.

Staff; F; Y.

615 Ceramics (3-6)

Prereq: 516.

Staff; F, W, Sp, Su; Y.

616 Ceramics (3-6)

Prereq: 615.

Staff; F, W, Sp, Su; Y.

715 Ceramics (3-6)

Prereq: 616.

Staff; F, W, Sp, Su; Y.

716 Ceramics (3-6)

Prereq: 715.

Staff; F, W, Sp, Su; Y.

815 Ceramics Written Thesis (2-6)

Staff; F, W, Sp, Su; Y.

816 Ceramics Studio Thesis (5-10)

Staff; F, W, Sp, Su; Y.

Glass

518 Glass (3)

Introduction to glassblowing and other techniques in hot, cold, and flat glass working.

Staff.

519 Glass (3)

Prereq: 518. Continuation of 518.

Staff; F, W, Sp; Y.

Painting

505 Painting (3-6)

Staff; F, W, Sp, Su; Y.

506 Painting (3-6)

Prereq: 505.

Staff; F, W, Sp, Su; Y.

600 Painting Seminar (3)

Discussions, readings, presentations, and papers related to developments in recent painting.

Staff; F; Y.

605 Painting (3-6)
Prereq: 506.
Staff; F, W, Sp, Su; Y

606 Painting (3-6)
Prereq: 605.
Staff; F, W, Sp, Su; Y

705 Painting (3-6)
Prereq: 606.
Staff; F, W, Sp, Su; Y

706 Painting (3-6)
Prereq: 705.
Staff; F, W, Sp, Su; Y

805 Painting Written Thesis (2-6)
Staff; F, W, Sp, Su; Y

806 Painting Studio Thesis (5-10)
Staff; F, W, Sp, Su; Y

Photography

591A Photographic Processes (5)
Prereq: grad rank. Intensive study of black and white materials and their creative uses. 2 lec, 6 lab.
Williams; F; Y

591B Photographic Processes (5)
Prereq: grad rank. Continuation of 591A with emphasis on quality control in printing.
Williams; W

591C Photographic Processes (5)
Prereq: grad rank. Continuation of 591A and 591B.
Gassan; Sp; Y

592A Multiple Images (5)
Prereq: grad rank. Camera reporting and documentaries; essays and picture stories; book layout; experimental work with multiple images for any desired single or accumulative effect. 2 lec, 6 lab.
Eiler; F; Y

592B Multiple Images (5)
Prereq: grad rank. Continuation of 592A.
Eiler; W; Y

592C Multiple Images (5)
Prereq: grad rank. Continuation of 592A and 592B.
Eiler; Sp; Y

593A Combined Applications (5)
Prereq: grad rank. Fundamentals of portraiture. 2 lec, 6 lab.
Eiler; Sp; Y

593B Combined Applications (5)
Prereq: grad rank. Fundamentals of advertising and commercial work. 2 lec, 6 lab.
Eiler; W; Y

593C Combined Applications (5)
Prereq: grad rank. Fundamentals of architectural and industrial renditions.
Eiler; Sp; Y

594A Color Materials and Methods (5)
Prereq: grad rank. Theory of color; practice with transparency materials; slide show multi-media presentations. 1 lec, 8 lab.
Williams; F, W, Sp, Y

594B Color Materials and Methods (5)
Prereq: grad rank. Continuation of 594A; color negatives, direct separations, separations from transparencies, masking and color printing methods.
Williams; F, W, Sp, Y

594C Color Materials and Methods (5)
Prereq: grad rank. Continuation of 594A and 594B, advanced color printing.
Staff; Sp; Y

690 Photographic Seminar (3)
Contemporary trends and concepts of photographic art as basis for individual studies.
Staff; F; Y

691A Graduate Study in Photographic Arts (5-10)
Prereq: grad rank. Individual practice under instructor's supervision. Max of 10 hrs allowed from 691 series.
Staff; F; Y

691B Graduate Study in Photographic Arts (5-10)
Prereq: grad rank. Continuation of 691A. Max of 10 hrs allowed from 691 series.
Staff; W; Y

691C Graduate Study in Photographic Arts (5-10)
Prereq: grad rank. Continuation of 691A and 691B. Max of 10 hrs allowed from 691 series.
Staff; Sp; Y

791A Advanced Study in Photographic Arts (5-10)
Prereq: grad rank, 10 hrs in 691 series. Individual practice under instructor's supervision. Max of 15 hrs allowed from 791 series.
Staff; F; Y

791B Advanced Study in Photographic Arts (5-10)
Prereq: grad rank, 10 hrs in 691 series. Continuation of 791A. Max of 15 hrs allowed from 791 series.
Staff; W; Y

791C Advanced Study in Photographic Arts (5-10)
Prereq: grad rank, 10 hrs in 691 series. Continuation of 791A and 791B. Max of 15 hrs allowed from 791 series.
Staff; Sp; Y

891 Photography Written Thesis (6)
Staff; F, W, Sp, Su; Y

892 Photography Studio Thesis (5-10)
Staff; F, W, Sp, Su; Y

Printmaking

541 Printmaking (3-6)
Staff; F, W, Sp, Su; Y

542 Printmaking (3-6)
Prereq: 541.
Staff; F, W, Sp, Su; Y

640 Printmaking Seminar (3)
Discussions, readings, presentations, and papers on topics of specific interest and concern to printmakers.
Staff; F; Y

641 Printmaking (3-6)
Prereq: 542.
Staff; F, W, Sp, Su; Y

642 Printmaking (3-6)
Prereq: 641.
Staff; F, W, Sp, Su; Y

741 Printmaking (3-6)
Prereq: 642.
Staff; F, W, Sp, Su; Y

742 Printmaking (3-6)
Prereq: 741.
Staff; F, W, Sp, Su; Y

840 Printmaking Written Thesis (2-6)
Staff; F, W, Sp, Su; Y

841 Printmaking Studio Thesis (5-10)
Staff; F, W, Sp, Su; Y

Sculpture

531 Sculpture (3-6)
Staff; F, W, Sp, Su; Y

532 Sculpture (3-6)
Prereq: 531.
Staff; F, W, Sp, Su; Y

630 Sculpture Seminar (3)
Projects, research, and discussion of topics of specific interest and concern to sculptors.
Staff; F; Y

631 Sculpture (3-6)
Prereq: 532.
Staff; F, W, Sp, Su; Y

632 Sculpture (3-6)
Prereq: 631.
Staff; F, W, Sp, Su; Y

731 Sculpture (3-6)

Prereq: 632.

Staff; F, W, Sp, Su; Y.
732 Sculpture (3-6)

Prereq: 731.

Staff; F, W, Sp, Su; Y.
831 Sculpture Written Thesis (2-6)
Staff; F, W, Sp, Su; Y.
832 Sculpture Studio Thesis (5-10)
Staff; F, W, Sp, Su; Y.

Inter-Area

601 Interdisciplinary Seminar (3)

Readings, discussions, and presentations exploring relationship between various visual arts disciplines.

Staff; W; Y.
780 Individual Problems (1-6)
Staff; F, W, Sp, Su; Y.
781 Individual Reading (1-3)
Staff; F, W, Sp, Su; Y.

AUDIOLOGY

(See Hearing and Speech Sciences)

BACTERIOLOGY

(See Zoological and Biomedical Sciences)

BIOLOGY

(See Botany or Zoological and Biomedical Sciences)

BLACK STUDIES

(See Afro-American Studies)

BOTANY

Doctor of philosophy and master of science degree programs are offered in the following areas of specialization: biochemistry, cell biology, ecology, morphology, mycology, paleobotany, physiology, pteridology, and systematics.

To begin graduate study the student must have at least 24 quarter hours, or the equivalent, of botany and/or related biological sciences. Applicants also must have completed calculus, inorganic chemistry, and physics. Deficiencies in undergraduate preparation may be eliminated during the course of graduate study. Scores from both the aptitude and biology advanced tests of the Graduate Record Examination are suggested. Foreign applicants whose native language is not English must submit scores from either the English Test of the University of Michigan English Language Institute or the Test of English as a Foreign Language (TOEFL) as an evaluation of English proficiency.

Organic chemistry is required for completion of graduate degrees. Coursework in biochemistry and proficiency in one foreign language (French, German, Russian, or other, depending on research needs) are required for the Ph.D. degree. All graduate students in botany are required to teach a minimum of two quarters

during their tenure in the department. A research thesis (M.S.) or dissertation (Ph.D.) resulting from original research is required. A nonthesis terminal M.S. degree is also available.

Applications for admission to graduate study in botany are accepted during all quarters. Applications for financial aid for the following academic year should be received before March 15.

604 Plant Physiology (5)

Prereq: organic chemistry. Critical examination of experimental basis of plant physiology. Topics include: water relations; uptake and transport of ions and nonionic compounds; plant growth regulators and their roles in growth and development; and carbon, nitrogen, and sulfur metabolism in plants.

Smith; W; Y; 1983.
625 Plant Ecology (5)

Prereq: perm. Environmental factor effects on species growth and distribution; review of recent ecological literature. 3 lec, 4 lab, 1 Saturday field trip.

Ungar or Wistendahl; F; Y; 1982.
626 Vegetation Analysis (5)

Prereq: perm. Analysis of natural plant communities and readings in literature of community ecology. 3 lec, 4 lab, 1 Saturday field trip.

Wistendahl; Sp; A; 1982.
633 Paleobotany (5)

Prereq: perm. Morphology, evolution, and stratigraphic position of representative fossil plant groups. Field trips.

Rothwell; Sp; D; 1983.
640 Molecular Genetics (4)

Prereq: perm. Fine structure of gene, biochemistry of gene action, cytoplasmic inheritance. 4 lec.

Staff; W; A, D.
650 Instrumentation and Techniques (5-10)

Instruments and techniques used in solution of contemporary biological research problems. Theoretical and practical aspects included. 5 lec.

Staff; F; D.
654 Phycology (5)

Prereq: perm. Classification, nomenclature, relationships, morphology, reproduction, life histories, and economic importance of freshwater and marine algae. 3 lec, 4 lab.

Staff; D.
655 Biology of Fungi (5)

Prereq: perm. Life history, morphology, classification, cytology, and physiology; including collection, isolation, and culture of selected fungi. 3 lec, 2 2-hr lab.

Miller; F; Y; 1982.
695 Thesis (1-15)

Prereq: perm. Formal presentation of results of research as partial fulfillment of requirements for M.S. degree. Hrs not counted toward degree.

Staff; F, W, Sp, Su; Y.
732 Cytology (5)

Prereq: perm. Biochemical, cytochemical, and ultrastructural aspects of cytoplasmic organelles, mitosis, meiosis, and cellular differentiation.

Mitchell; Y; S; 1982.
751 Plant Biochemistry (5)

Prereq: perm. Critical examination of current biochemical literature. Topics include: isolation, purification, and chemistry of proteins; properties and mechanisms of action of enzymes; principles governing biochemical reactions and regulation of reactions and reaction sequences in bacteria and plants.

Smith; Sp; A, Y; 1982.
752 Topics in Cell Biology (2-5)

Prereq: perm. Advanced discussion courses offered when there is sufficient student interest in a significant current topic.

Staff; D.
752E EM Techniques (5)

Prereq: perm of EM Committee. Operation of transmission electron microscope and ancillary equipment, ultramicrotomy and fixation-embedding procedures for plant material. Open only for botanical graduate students requiring TEM for thesis or dissertation research.

Braserton; Sp; Y; 1982.

753 Developmental Physiology (5)

Prereq: perm. Advanced physiology lecture course. Growth and developmental phenomena with special emphasis on flowering plants. Topics include cell growth and differentiation in developing meristems; tissue and organ development and culture; dormancy and germination; flower induction; seed formation; hormones; senescence; plant movements; phytochrome; salt stress and holocoenotic effects of environment on morphogenesis.

Staff; Sp; A, Y; 1982.

754 Experimental Ecology (5)

Prereq: 625, 626, or perm. Theory and methods involved in studying natural plant communities. 3 lec, 4 lab.

Ungar; W; Y; 1983.

757 Topics in Plant Ecology (5)

Prereq: perm. Theories and principles of plant distribution as related to evolution, migration, and speciation of plants.

Staff; D.

758 Plant Systematics (6)

Prereq: perm. Floristic and experimental approaches, evolutionary processes and patterns, research tools, and literature basis to classification in flowering plants. Emphasis in laboratory work on methods and practice in determining relationships between natural populations of plants at infrageneric level. 2 lec, 4 lab.

Lloyd or Cantino; Sp; Y; 1982.

759 Topics in Fungi (2-6)

Prereq: perm. Advanced discussion courses offered when there is sufficient student interest in a significant current topic.

Staff; D.

759A Aquatic Phycomycetes (5)

Prereq: perm. Collection, isolation, culture, morphology, taxonomy, and life histories of aquatic fungi with swimming spores.

Miller; W; D.

759B Ascomycetes (5)

Prereq: perm. Selected aspects of morphology, taxonomy, reproduction, and morphogenesis of Ascomycetes.

Miller; D.

759C Cellular Slime Molds (5)

Prereq: perm. Developmental and ecological problems in cellular slime molds; review of current areas of research; use of cellular slime molds as research tools. 3 lec, 3 lab.

Cavender; W; D.

780 Advanced Topics in Botany (2-6)

Prereq: perm. Advanced discussion courses offered when there is sufficient student interest in a significant current topic.

Staff; D.

780A Histochemistry (5)

Prereq: perm. Theoretical and practical survey of available techniques for qualitative and quantitative analysis of cell and tissue constituents using microscopic procedures.

Mitchell; Sp; D, A.

780B Advanced Biochemistry (5)

Prereq: 751 and perm. Discussion of selected topics from current biochemical literature. Topics include regulation of amino acid biosynthesis, transport mechanisms, intracellular localization of enzymes and metabolites, photosynthetic carbon fixation.

Staff; D.

780C Vascular Morphology (6)

Prereq: perm. Comparative morphology, anatomy and life histories of vascular plants. 3 lec, 6 lab.

Rothwell or Cantino; W; Y; 1983

780D Plant Anatomy (5)

Prereq: perm. Structure, development, and systematic anatomy of vascular plants. 3 lec, 3 lab.

Rothwell; D; 1982

780F Botanical Pedagogy (2-6)

Prereq: perm. Preparation for botanical teaching in colleges and universities

Staff; F, W, Sp, Su, Y

780G Supervised Study (2-6)

Prereq: perm. Supervised individual study under faculty guidance.

Staff; D.

780K Pteridology (5)

Prereq: 780C, and perm. Reproductive biology, genetics, cytology, developmental physiology, morphology, and classification of gametophytic and sporophytic generations. Laboratory emphasis on

experimental work with gametophytes and systematics. 2 lec, 3 lab.

Lloyd; D.

780M Soil Microbiology (5)

Prereq: perm. Distribution and activity of microorganisms in soil. Topics include soil structure, organisms present, methods of examining soil populations, ecology, and distribution of microorganisms. 3 lec, 3 lab.

Cavender; W; D.

780P Colloquium (1)

Prereq: grad rank. Discussions of current research by visiting scientists, faculty members, and graduate students.

Staff; F, W, Sp; Y.

791 Seminar (2)

Prereq: perm. Graduate students present seminars on topics of current botanical interest.

Staff; F, W, Sp, Su, Y.

795 Research (1-15)

Prereq: perm. Original research in field of major interest under supervision of student's major advisor. Results and conclusions resulting from research may be presented in M.S. thesis or Ph.D. dissertation as partial fulfillment for respective degrees.

Staff; F, W, Sp, Su, Y.

895 Dissertation (1-15)

Prereq: perm. Scholarly account of original research in major area of interest as partial fulfillment of requirements for Ph.D. degree.

Staff; F, W, Sp, Su, Y.

BUSINESS ADMINISTRATION

Accounting

Business Administration

Business Law

Computer Systems in Business

Finance

Management Systems

Marketing

Quantitative Methods

THE REGULAR M.B.A.

The Ohio University M.B.A. is a two-phase program. Phase I consists of foundation courses aimed at the development of basic background knowledge in business and administration. Phase I courses are completed before starting Phase II.

PLANNING YOUR PROGRAM

Applicants should note carefully that Phase II (advanced level) is only offered in one sequence beginning in the fall of each academic year. Although admission is possible for any of the four quarters, students should plan to enter according to their Phase I course needs. Foreign students whose English is not up to the level required for advanced graduate work must plan for one to three quarters of English training. The objective in selecting the appropriate entry quarter is to complete any necessary English training and the Phase I courses in time to be ready for beginning the fall quarter Phase II courses. In planning the Phase II portion of the program, students should note carefully that the capstone course — BA 680 — may be taken only after fall and winter Phase II courses have been successfully completed.

Phase I — The Foundation Courses

Courses	Credit Hours
ACCT 501 and 502 Accounting Principles	4,4
BA 510 Production Management	4
BUSL 500 Business Law	4
ECON 503 and 504 Micro/Macro Economics	4,4
FIN 525 Managerial Finance	4

MGT 500 Management (Introductory)	4
MKT 501 Marketing Principles	4
QM 500 Calculus	4 or 5
QM 510 Statistics	4 or 5

It is possible to demonstrate competence and meet Phase I requirements in a number of ways:

1. The courses may be taken as an integral part of the graduate program.
2. Any or all of the required foundation courses may be waived if the student has successfully completed comparable courses during undergraduate study.
3. The student may take many of the foundation courses by correspondence or Course Credit by Examination or both.

Phase II — Advanced Concepts and Applications

Students are required to complete 45 quarter hours of work for Phase II of the program. This comprises 12 hours of graduate electives and 33 hours of specified Phase II courses. Below is the sequence of the Phase II course offerings:

Fall Quarter

	Credit Hours
MGT 650 Management Information Systems	4
MGT 640 Organization Behavior	4
ACCT 630 Managerial Accounting	4
Survey of Computer Applications	1
Elective (optional)	

Winter Quarter

ECON 600 Managerial Economics	4
MKT 655 Marketing Management	4
FIN 625 Financial Decision Making	4
Elective (optional)	

Spring Quarter

QM 614 Operations Research	4
BA 680 Master's Seminar	4
Electives (optional)	

The 12 hours of electives may consist of legitimate graduate-level courses or credit hour projects in business and economics disciplines or courses outside the college in such areas as engineering, public administration, communications, education, etc. Electives outside business and economics must be graduate courses (numbered 500+) and approved on a course-by-course basis, however.

During the week before the start of regularly scheduled classes in the fall, students must attend a required orientation session. Foreign students must be on campus at least ONE WEEK prior to the first day of classes for additional processing (such as English testing) and special orientation activities by the Office of International Student and Faculty Services.

ADMISSION

Admission to the program is on a competitive basis. Factors considered include the undergraduate grade-point average, score on the Graduate Management Admission Test (GMAT), work experience, and recommendations.

All applicants for admission must submit two official transcripts of undergraduate work and three letters of recommendation. In addition, applicants must have GMAT test scores submitted by Educational Testing Service (ETS), Box 966, Princeton, New Jersey, 08540. Applicants whose native language is not English must also have ETS submit their scores for the Test of English as a Foreign Language (TOEFL).

FINANCIAL AID

The College of Business Administration has a limited number of graduate associateships and tuition scholarships available for students who demonstrate outstanding potential. Graduate associateships provide stipends of \$3,000 for the academic year and partial fees for three quarters, plus two summers. The student must pay only an incidental fee each quarter. The graduate associate is required to work approximately 15 hours weekly and to take at least nine academic hours each quarter. Students on tuition scholarships are required to take at least 15 academic hours each quarter.

Requests for financial aid should be noted on the application form. In addition, a letter requesting financial aid should be for-

warded to the director of graduate programs. All requests for financial aid should be received by April. Awards are generally announced in May.

THE ACCELERATED M.B.A.

Through Ohio University's Accelerated M.B.A. Program, students with degrees in nonbusiness disciplines have an opportunity to earn the M.B.A. in approximately one calendar year.

The accelerated portion of the program is the series of summer workshops in which all the Phase I courses *except* calculus, business law, and macroeconomics are offered.

Students who want to take advantage of the accelerated M.B.A. should complete all M.B.A. application requirements early so that an admissions decision can be made well before the workshops begin.

THE EXECUTIVE M.B.A.

The College of Business Administration offers at Ohio University's Lancaster campus a new M.B.A. program designed for experienced business executives. The M.B.A. for Executives Program is structured so that all academic requirements can be completed within two years, even while the executive continues to handle his or her professional responsibilities full-time. This is accomplished by offering courses on three Saturdays and one Friday a month during each of two academic years, with an independent research project completed during the intervening summer.

The program will benefit both the company and the executive. The organization will have the opportunity to strengthen its management resources and executives will be able to upgrade their managerial skills and to improve their opportunities for advancement into higher management.

The extensive business experience of both faculty and M.B.A. candidates, use of the seminar method for most teaching, and the deliberate attempt to select students from diverse functional areas and businesses will provide an overall scope of real managerial situations and challenges.

It is necessary for each candidate to have a baccalaureate degree, a minimum of seven years of experience on a managerial level, and sponsorship from the employing organization, and to complete a personal interview.

Accounting

501 Accounting Principles (4)

Intensive overview of accounting theory, practice, and statement preparation.

Staff; F, W, Sp, Su; Y.

502 Managerial Accounting (4)

Prereq: 501. Continuation of 501. See 501 for description.

Staff; F, W, Sp, Su; Y.

503 Intermediate Accounting (4)

Fundamental accounting principles and practices emphasizing data accumulation using accounting techniques. Primarily intended for those specializing in accounting.

Staff; F, W, Y.

504 Intermediate Accounting (4)

Preparation and analysis of accounting statements: special problems in accounting for current, fixed, and intangible assets; for liabilities; and for corporate worth; funds and reserves, and investments.

Staff; F, Sp; Y.

505 Intermediate Accounting (4)

Continuation of 504. See 504 for description.

Staff; F, W, Y.

506 Advanced Accounting (4)

Problems peculiar to partnerships, fiduciaries, and trusts; governmental accounting; branches, consolidations, and mergers; and foreign exchange.

Staff; W, Y.

507 Advanced Accounting (4)

Investigation of current topics.

Staff; Sp; A.

510 Cost Accounting (4)

Specialized problems of cost accumulation and analysis of manufacturing corporations. Emphasizes costs for making management decisions.

Staff; W, Sp, Su; Y.

540 Advanced Cost Accounting (4)

Prereq: 510. Analysis of relevant costs for decision-making including nonmanufacturing costs. Current cost accounting topics.

Staff; W.

547 Tax Research (4)

Advanced tax problems of individuals, partnerships, and corporations with emphasis on tax research and research methodology.

Staff; Sp.

551 Auditing Principles (4)

Purposes and scope of audits and examinations; audit principles and procedure; audit reports and certificates.

Staff; W, Sp.

630 Managerial Accounting (4)

Prereq: Phase II M.B.A. students only. Planning and control of organizations through internal and external quantitative information, emphasizing techniques and theory of accounting and finance.

Staff; F; Y.

691 Seminar (3-5)

Staff; F, W, Sp, Su; D.

693 Readings (1-15)

Staff; F, W, Sp, Su; D.

697 Independent Research (1-15)

Staff; F, W, Sp, Su; D.

698 Internship (1-15)

3 months of accounting work experience. Requirements include written and oral reports analyzing work experience and academic preparation for professional practice.

Staff; W; D.

Business Administration

510 Production Management (4)

Emphasis on organization of production function and its relationship to other management and functional activities.

Staff; F, W, Sp, Su; Y.

510W Production Management (3)

Emphasis on organization of production function and its relationship to other management functional activities. Accelerated workshop course for M.B.A. students.

Staff; Su, D.

511 Production Planning and Control (4)

Quantitative techniques used in premanufacturing and control phases of production function.

Staff; W, D.

512 Production Management Problems (4)

Case studies of production problems in various industries.

Staff; Sp.

531 Administration of Information Systems (4)

Information networks and flows in organizations within total systems framework.

Staff; D.

545 Small Business Administration (4)

Place of small business organizations in our society; need for organizations in certain segments of business society; problems faced, opportunities involved, and competitive considerations.

Pugh, W.

555 Studies in Business History (4)

Case studies of American businessmen and firms since early colonial period, with emphasis on 20th century. Lessons from past examined in relation to present sound business policy.

Staff.

560 Future of Information Management (4)

Planning and implementing change in information systems. 10-yr look ahead for administrators. Information management changes required for decision making in both profit-centered and service-centered organizations.

Staff; D.

565 Technology and the Environment (4)

Prereq: perm. There is everywhere great concern for things to come. Real problem is not just to predict future but how to anticipate, control, and change it. Course is conceptual, future-oriented, and interdisciplinary. Variety of developmental problems and interaction of many technological environments including social, political, economic, marketing, as well as technical.

Staff; W; A.

580 Ethics and Morality in Business (4)

Combined moral philosophy and personal responsibilities in actual business and administrative case decisions demanding critical analysis of contextual situation where provisional resolutions must be indirectly charted between economical thoughts and economic musts.

Staff.

585 International Business (4)

Emergence of U.S. and non-U.S. multi-national corporations, scope of their operations, and their impact on U.S. economy and consumer.

Staff; D.

670 Business Policy (4)

Top management view of decision making affecting future operations of a business, and opportunities, risks, and responsibilities accompanying formulation of company policy and strategy.

Sp; Y.

671 Production Theory and Systems (4)

Quantitative models and readings in networks, programming, forecasting, inventory policy, production control, and individual dynamics.

Staff; D.

672 Advanced Production Problems (4)

Case studies in industries designed to apply all phases of student's training and experience.

Staff; D.

680 Master's Seminar (1-4, max counted toward graduation — 4)

Prereq: M.B.A. student. Seminar concentrating on integration of concepts from required M.B.A. courses and application of these concepts in operating organizations.

Staff; F, W, Sp; Y.

690 Research (3, 4, or 5)

Methodology, analysis of data, and preparation of research findings.

Staff; D.

691 Seminar (3, 4, or 5)

Selected topics of current interest.

Staff; D.

693 Readings (1-15)

Readings on topics selected by student in consultation with faculty member.

Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)

Staff; F, W, Sp, Su; Y.

697 Independent Research (1-15)

Research in selected fields of business administration under direction of faculty member.

Staff; F, W, Sp, Su; Y; 1974-75.

698 Internship (1-15)

Staff; F, W, Sp; Y.

Business Law

500 Law and Society (4)

Conceptual approach to origin, nature, structure, functions, and procedures of law with study of contractual relationships.

Staff; F, W, Sp, Su.

500W Law and Society (3)

Conceptual approach to origin, nature, structure, functions, and procedures of law with study of contractual relationships. Accelerated workshop course for M.B.A. students.

Staff; Su, D.

542 Law of Property and Real Estate (4)

Property law as institution and analysis of creation, transfer, and relation of various legal interests in property, especially land.

Staff; Sp, D.

560 Law of Health Care Industry (4)

Analysis of public-private contracts in foundation health agencies; experimentation and risk assumption; agency and independent contract liability; reasonable standards of care doctrines; governmental regulations; liability of nurses, doctors, and hospitals.

Staff; Y.

562 Law of Estates and Trusts (4)

Law as it pertains to decedents' estates including law of wills, intestate succession, and trusts.

Staff.

565 Law of Sports (4)

Addresses legal issues raised by industry with vast contours. Regulations of amateur athletics, public regulation of sports activities, legal relationships in professional sports, enforcement of professional sports contracts, antitrust aspects of sports activities, liability for injuries in sports activities.

Staff; W.

570 Environmental Law (4)

Legal aspects of individual and societal environmental rights and duties with respect to U.S. Constitution, private property, nuisance, negligence, statutes, regulatory agencies, and court decisions.

Staff; Sp.

575 Government and Business (4)

Governmental regulatory environment of business including analysis of statutes, court decisions, and rulings affecting policy decisions.

Staff.

690 Research (3, 4, or 5)

Methodology, analysis of data, and preparation of research findings.

Staff.

691 Seminar (3, 4, or 5)

Selected topics of current interest.

Staff.

693 Readings (1-5)

Readings on topics selected by student in consultation with faculty member.

Staff; F, W, Sp, Su.

Computer Systems in Business

525 Advanced FORTRAN (4)

Prereq: perm. Application of FORTRAN programming language to problems in marketing, finance, management, accounting, and economics.

Staff; W, A; 1982-83.

530 COBOL Programming (4)

Prereq: perm. Introduction to business-oriented computer language of COBOL.

Staff; F, W, Y; 1982-83.

535 Advanced COBOL (4)

Prereq: 430 or 530. Deals with application of COBOL programming language to problems in marketing, finance, management, accounting, and economics.

Staff; W, Sp, Y; 1982-83.

590 Systems and Procedures (4)

Prereq: perm. Orderly study of detailed methods for collecting, organizing, and evaluating information to improve operations of an organization.

Staff; W, Y; 1983.

Finance

525 Managerial Finance (4)

Role of financial management in business enterprise; financial analysis; planning needs for short-term and long-term funds; planning for profits; capital budgeting; internal management of working capital and income; raising funds to finance growth of business enterprises.

Staff; F, W, Sp, Su; A.

525W Managerial Finance (3)

Role of financial management in business enterprise; financial analysis; planning needs for short-term and long-term funds; planning for profits; capital budgeting; internal management of working capital and income; raising funds to finance growth of business enterprises. Accelerated workshop course for M.B.A. students.

Staff; Su; D.

527 Banking and the Financial System (4)

Functioning of commercial banking system and other financial institutions. Flow of funds and interest-price movements in money and capital markets. Supply of loanable funds and demand for funds in mortgage loan market, consumer credit market, corporate securities and municipal obligations. Consideration of effects on financial markets of Federal Reserve and Treasury policies.

Staff; F, Sp; Y.

528 Management of Financial Institutions (4)

Analysis of objectives, functions, practices, and problems of financial institutions as viewed by management of these institutions.

Staff; Sp; Y.

532 Property and Casualty Insurance (4)

Analysis of principal types of property and casualty insurance policies with respect to protection afforded policyholder, his or her obligations, and cost of protection. Policies studied include fire and extended coverage, allied line, business interruption, inland marine, automobile, general liability, theft, and bonds. Subjects of risk, insurance law, and multiple-peril policies also covered.

Staff; W; Y.

536 Life Insurance (4)

Fundamental economics of life insurance. Principles and practices of life insurance, including types of contracts, group and industrial insurance, and annuities.

Staff; W; Y.

537 Personal and Business Insurance Planning (4)

Consumer needs for all types of insurance; legal aspects and estate planning; risk management programs for business, including all forms of group insurance.

Staff; D.

539 Insurance Regulations and Financial Management (4)

Underwriting, reinsurance, financial analysis, and relevant insurance statutes and regulations.

Staff; D.

542 Security Analysis (4)

Selection and valuation of individual securities and industries. Fundamental analysis and determination of intrinsic value based on estimates of payment streams, capitalization rates, and rapidity of price convergence. Technical analysis and study of price-volume, trend-following, and crowd psychology.

Staff; Sp; A.

545 Portfolio Management (4)

Decision-making processes in management of individual and institutional securities portfolios. Theoretical foundations of portfolio selection and construction. Model-building and other criteria applicable to selection, risk-return tradeoffs, revision, and evaluation of portfolio performance. Applications of computer technology and other quantitative techniques to different aspects of portfolio management.

Staff; Sp; Y.

555 International Finance (4)

Developing skills to deal with variables influencing financial decision-making for multinational firm and international business. Foreign exchange rate determination, measurement of exposure, and exchange risk management. Study of strategies of entry in foreign markets and investment analysis of foreign projects. Study of working capital management. Study of institutions, practices, and problems related to financing foreign trade.

Staff; F; Y.

561 Problems in Business Finance (4)

Case study of financial management in business enterprises. Planning current and long-term financial needs, profit planning, allocation of funds, raising funds, dividend policies, expansion and combination, recapitalization and reorganization.

Staff; F, Sp; Y.

563 Capital Allocation (4)

Planning capital outlays, methods for ranking investment proposals, theories of financial structure and cost of capital, and approaches to investment decisions under conditions of uncertainty.

Staff; W; A.

565 Mathematical Analysis of Financial Decisions (4)

Application of quantitative methods to financial management, with special emphasis on systems approach to evaluating proposed financial decisions.

Staff; D.

625 Financial Decision-Making (4)

Prereq: 525 or perm. Concepts, constructs, and applications relevant to task of financial manager in dynamic environment.

Staff; W; Y.

631 Seminar in Insurance (4)

Current topics of significance in fields of life, health, property, and liability insurance; discussion of assigned readings and individual research reports.

Staff.

650 Seminar in Money and Capital Markets (4)

Analysis of conditions in money and capital markets as they affect business decisions; flow of funds in the U.S.; States; structures of interest rates; role of monetary policy and its effects on financial markets; principal instruments and intermediaries in money and capital markets; analysis of important segments of financial markets.

Staff; D.

690 Research (3, 4, or 5)

Methodology, analysis of data, and preparation of research findings.

Staff; D.

691 Seminar (3, 4, or 5)

Selected topics of current interest.

Staff; F, W, Sp; D.

693 Readings (1-15)

Readings on topics selected by student in consultation with faculty member.

Staff; F, W, Sp, Su; D.

695 Thesis (1-15)

Staff; F, W, Sp.

697 Independent Research (1-15)

Research under direction of faculty member.

Staff; F, W, Sp, Su; D.

698 Internship (1-15)

Staff; F, W, Sp, Y.

Management Systems

500 Management (4)

Management and organization concepts and theory.

Staff; F, W, Sp, Su.

520 Administration of Personnel (4)

Prereq: perm. Compendium of practices in personnel management. Consideration of such areas as employee selection, training, performance evaluation, and wages and salary administration.

Staff; F, W, Sp, Su, Y.

521 Personnel Management Problems (4)

Prereq: 520 or perm. Personnel problems and their relation to various ethnological concepts. A case approach.

Staff; Y.

525 Labor Relations (4)

Prereq: perm. Nature of collective bargaining, labor-management conflict or consensus, grievance procedures, arbitration; contract administration.

Staff; F, W, Sp, Su.

526 Manpower Management (4)

Prereq: 520 and 525. Advanced course in manpower management, integrating personnel, and labor relations functions at planning and policy-making level.

Staff; Y.

528 Nonindustrial Labor Relations (4)

Prereq: grad rank and perm. Labor management relations problems and practices in nonprofit organizations such as government (city, county, state, and federal), educational institutions, charity and health care organizations. Covers such topics as relevant laws and regulations, administrative response to unionization attempts, contract negotiation.

Staff; Y.

530 Management Systems: Decision-Making (4)

Prereq: grad rank. Decision-making and problem solving in organizations from a managerial perspective.

Staff; F, W, Sp.

535 Management of Human and Technological Information Systems (4)

Prereq: 530 or perm. Focuses upon humans and machines as components of formalized information systems. Subject matter approached from systems and procedures viewpoint, with particular emphasis on management planning and control techniques.

Staff; Y.

540 Organizational Behavior — Leadership and Motivation (4)

Prereq: perm. Conceptual framework of behavioral sciences to management and organizations. Motivation and leader behavior within organizational settings.

Staff; F, W, Sp, Su.

540W Organizational Behavior — Leadership and Motivation (3)

Conceptual framework of behavioral sciences to management and organizations. Motivation and leader behavior within organizational settings. Accelerated workshop course for M.B.A. students.

Staff; Su; D.

545 Organizational Behavior — Work Groups and Formal Organizations (4)

Prereq: 540 or perm. Organizational theory and behavior emphasizing formal organizational theory and work group behavior. Emphasis on interaction between organization, its environment, and its members and influence of informal work groups on member behavior.

Staff; Y.

550 Managing Health Care Organizations (4)

Prereq: 200 or 300. Analysis of basic dimensions of managing health care organizations. Develops conceptual tools for understanding health care management problems and provides practice in analyzing and solving actual health care management problems.

Staff; Y.

584 International Comparative Management (4)

Survey and analysis of similarities and differences in management systems, processes, and styles, as well as evaluation of changes and their impact in selected groups of countries.

Staff.

591 Seminar (3, 4, or 5)

Prereq: perm. Selected topics of current interest in management and organizational behavior area.

Staff.

596 Organizational Behavior — Managing Change (4)

Prereq: 540, 545, or perm. Planning and implementing changes in organizational settings.

Staff; Y.

640 Organizational Behavior (4)

Application of psychology, sociology, anthropology, political science, and other behavioral disciplines to working with and through individuals and groups.

Staff; Y.

650 Management Information Systems (4)

Concentrated introduction to tools, techniques, and concepts underlying management of information that are critical in understanding and dealing with problems arising in development and use of management information systems.

Staff; Y.

691 Seminar (3, 4, or 5)

Selected topics of current interest

Staff.

692 Management Thought (4)

Review of development of managerial theories from 5000 B.C. to present with consideration of their application to present organizational settings.

Staff.

693 Readings (1-5)

Readings on topics selected by student in consultation with faculty member.

Staff; F, W, Sp, Su.

694 Management Research (4)

Prereq: perm. Practical application of research methods in behavioral sciences to management problems, emphasizing research available and its use in decision making, and in solving managerial problems.

Staff.

696 Organizational Behavior — Managing Change (4)

Prereq: 540, 545, or perm. Planning and implementing change in organizational settings.

Staff.

697 Independent Research (1-5)

Research in selected fields under direction of faculty member.

Staff; F, W, Sp, Su.

698 Internship (1-15)

Staff; F, W, Sp, Su; Y.

Marketing

501 Marketing Principles (4)

Emphasis on practices and problems of marketing manager and environment in which he or she operates, supplemented with business cases.

Staff; F, W, Sp, Y.

501W Marketing Principles (3)

Emphasis on practices and problems of marketing manager and environment in which he or she operates, supplemented with business cases. Accelerated workshop course for M.B.A. students.

Staff; Su; D.

502 Marketing Principles (4)

Principles of marketing management with emphasis on practices and problems of marketing manager and environment in which he or she operates, supplemented with business cases.

Staff; F, W, Sp, Su; Y.

503 Marketing Problems and Cases (4)

Problems facing manufacturers and middlemen in marketing programs. Students will develop integrated marketing programs based on cases taken from actual business situations. Emphasis on development of analytical skills.

Staff; F, W, Sp, Y.

504 Management of Distribution (4)

Problems encountered by manufacturer in establishing and maintaining effective distribution system, concentrating on channel design and strategies.

Staff; W; Y.

525 Industrial Marketing (4)

Investigation and analysis of problems involved in marketing of industrial products.

Staff; D.

541 International Marketing (4)

Marketing problems, opportunities, and organization of multinational firms to serve overseas markets. Government aids and impediments, and a comparison of markets and marketing techniques in U.S. and foreign countries.

Staff; Sp; Y.

544 Consumer Behavior (4)

Individual, social, and cultural influences that affect consumer behavior. Consideration of explanatory and predictive models.

Richmond; F, W, Sp; Y.

546 Sales Forecasting (4)

Forecasting techniques and methodologies applied to estimation of future environments in which business and marketing managers will have to operate.

Staff; Sp; D.

550 Management of Promotion (4)

Problem-solving course leading to development and management of firm's promotional mix with emphasis on use of mass media and on stimulation of reseller's cooperation.

Staff; W; Y.

558 Sales Management (4)

Principles and practices in planning, organizing, and controlling sales force. Selection, training, compensating, supervising, and stimulating salesmen. Analysis of sales potentials and costs.

Staff; W; A.

561 Social Issues of Marketing (4)

Designed to increase awareness of future marketing managers of contemporary social issues and legal requirements of marketplace. Areas include social critics, past and present, and their criticisms, including excessive promotion, unsafe and unnecessary products, high prices, and possible societal and governmental response to these criticisms.

Lindley; A.

562 Product Development (4)

Examination of new product development activities to identify significant factors to be studied and decisions required in researching, manufacturing, and marketing new products.

578 Marketing Theory (4)

Investigation of theoretical framework of marketing operations and marketing environment.

Staff; D.

579 Marketing Research (4)

Techniques involved in collection, tabulation, and analysis of marketing information.

Staff; F; Y.

580 Mathematical Models of Marketing Analysis (4)

Quantitative techniques that can be used in analysis of marketing problems and application of these methods to problem situations.

Staff; W; Y.

635 Marketing Management (4)

Prereq: 501 or perm. Analysis of markets and marketing activities as practiced in corporations in a dynamic society.

Staff; W; Y.

645 Seminar in Consumer Behavior (4)

Behavioral science research as it applies to marketing process.

Staff; Sp; Y.

655 Managerial Marketing (4)

Extensive case analysis of problems encountered by manufacturer and middleman in marketing consumer goods and industrial products.

Staff; W; Y.

663 Marketing Strategy (4)

Analysis of preparation and organization of overall marketing plans, and elements of marketing mix. Also developed are merchandising analyses, objectives, and strategies which take into consideration the everchanging consumer, trade, and legal environment as well as firm's costs.

Staff.

666 Seminar in Marketing Theory (4)

Investigation of theoretical framework of marketing activities and operations.

Staff; W; A.

690 Research (3, 4, or 5)

Methodology, analysis of data, and preparation of research findings.

Staff.

691 Seminar (3, 4, or 5)

Selected topics of current interest in marketing area.

Staff; D.

693 Readings (1-15)

Readings on topics selected by student in consultation with faculty member.

Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)

Staff; F, W, Sp.

697 Independent Research (1-15)

Research under direction of faculty member.

Staff; F, W, Sp, Su; Y.

698 Internship (1-15)

Staff; F; Y.

Quantitative Methods

NOTE: Students should check with the department to learn when those courses marked with an asterisk (*) will be taught.

500 Mathematical Foundations (4)

Introduction to differential calculus, integral calculus, and linear algebra with economic and business models and application.

Staff; F; Y; 1982-83.

503 Statistical Quality Control (4)*

Prereq: 510 or perm. Application of sampling theory to quality control: in process control (i.e., control charts) and sampling inspection (i.e., attribute and variable).

Staff; D.

510 Statistical Foundations (4)

Introduction to probability theory, statistical distributions, sampling, estimation, testing and decision theory for economists and business administrators.

Staff; F; Y; 1982-83.

534 Design of Experiments (4)*

Prereq: 510 or perm. Nested, split plots; replicated designs; multi-factor experiments; compounding fractional factorials; analysis of covariance.

Staff; D.

538 Nonparametric Statistics (4)*

Prereq: 510 or perm. Appropriate statistical tests; power, asymptotic efficiency; parametric vs nonparametric; Fisher's randomization method; run test; multi-sample tests, one-way ANOVA and two-way ANOVA; miscellaneous tests.

Staff; D; 1979-80.

545 Forecasting Business Trends (4)*

Prereq: 201, 510, or equiv. Forecasting techniques and methodologies as tools used by decision makers to provide basis for determining future business environments. Forecasting as means for integrating total corporate planning with technical marketing and financial planning.

Staff; Sp; A; 1981.

551 Statistical Survey Techniques (4)*

Prereq: 510 or perm. Techniques and analysis of sample surveys applied in opinion polling, marketing, auditing, and other business functional areas.

Staff; D.

554 Intermediate Probability Theory (4)

Prereq: 510 or perm. Random variables — multidimension (continuous and discrete), moments, moment-generating functions and expected values, limiting theorems.

Staff; F; Y; 1982-83.

555 Intermediate Statistical Inference (4)

Prereq: 554 or perm. Estimation, tests of hypotheses, sampling, analyses of variance, design of experiments.

Staff; W; Y; 1982-83.

556 Regression Analysis (4)*

Prereq: perm. Time series analysis, game theory, regression and correlation analysis, and introduction to decision making.

Staff; D, 1977-78.

561 Bayesian Statistics (4)*

Prereq: 510 or perm. Probability and statistics taught from Bayesian point of view.

Staff; D

581 Mathematical Methods of Marketing Analysis (4)*

Prereq: 401-614 or perm. Quantitative techniques used in analysis of marketing problems and applications of these methods to problem situations. (Course will be taught on team basis with marketing and quantitative methods faculties.) (Same as Mkt 581.)

Staff; D

585 Simulation (4)*

Prereq: 401-614 or equiv or perm. Development of models of complex management decision environments and their manipulation via computer simulation. GLSS programming language. Interpretation of simulation results. Application to problems in marketing, finance, and production.

Staff; Sp, A, 1983

614 Operations Research (4)

Prereq: 500 and 510 Phase II M.B.A. students only. Introductory survey of techniques of operations research, viewed as part of applied decision theory. Applications in fields of accounting, pro-

duction, finance, and marketing stressed. Covers such topics as inventory models, linear programming, network analysis, scheduling models, and simulation. Interface with nonprofessionals and problems of implementation of solutions stressed.

Staff; Sp, Y; 1983.

635 Econometrics I (4)

Prereq: 500. Application of statistics to economic and business data, design and estimation of economic and business models, multiple regression theory, and stepwise regression programs. (Same as ECON 635.)

Shukla or Koshal; W; D; 1980.

636 Econometrics II (4)*

Prereq: 635. Topical areas of econometrics such as autocorrelation, lagged variables, dummy variables, multicollinearity, simultaneous equation models, and selected computer programs. (Same as ECON 636.)

Shukla or Koshal; Sp; D; 1980.

693 Readings (1-15)

Prereq: Phase II M.B.A. students only. Readings on topics selected by student in consultation with faculty member.

Staff; F, W, Sp; Y; 1982-83.

697 Independent Research (1-15)

Research under direction of faculty member.

Staff; F, W, Sp; Y; 1982-83.

CHEMICAL ENGINEERING

(See Engineering, Chemical)

CHEMISTRY

Master of science and Ph.D. programs are offered in analytical, biological, inorganic, organic, and physical chemistry. All degree programs include teaching and research experience.

The typical beginning student will have completed undergraduate courses in analytical, inorganic, organic, and physical chemistry. Calculus and a one-year physics sequence should also be part of the applicant's undergraduate training. Successful students have also come from undergraduate programs in botany, physics, and chemical engineering. In these latter cases deficiencies in undergraduate chemistry preparation can be made up during the first year.

The core curriculum of CHEM 550, 558, 576, 580, and 586 is generally taken during the first year of study. Students may take entrance examinations in the areas of physical, inorganic, organic, and analytical chemistry which, if successfully passed, excuse the student from the appropriate core courses.

The program of study is flexible in order to take advantage of the previous training of each student and to meet the particular needs of each individual in his or her specialized area of study. A student interested in analytical chemistry would be expected to complete the CHEM 583, 584, and 585 sequence during the first year while a student in biochemistry would complete the CHEM 590, 591, and 592 sequence.

The M.S. program requires 45 graduate credits in chemistry and approved electives. A seminar course is required each quarter and the M.S. student must present one satisfactory seminar, usually during the second year of study. An examination is given after one year of study to determine if the student is qualified to continue graduate work. Failure of this examination may lead to a decision that the student cannot receive a M.S. degree. There is no foreign language requirement for the M.S. degree. The average period of study is two and one-half years. The student must defend the thesis orally at a public meeting of his or her advisory committee.

The Ph.D. program has no fixed number of required graduate credits. The student, the major advisor, and an advisory committee will determine the coursework that should be completed. The major advisor will determine the amount of research required for the dissertation. A seminar course is required each quarter and the Ph.D. student must present two satisfactory seminars, usually during the second and third years of study. A qualifier examination is given after approximately one year of study to determine if the student should continue in the program. A failure of this ex-

amination may lead to a decision that the student cannot receive a graduate degree. During the second and third years of the Ph.D. program the student takes monthly examinations on subjects announced in advance by the faculty in the student's research area. Four of the first ten examinations offered must be passed for the Ph.D. degree. The scholarly discipline requirement may be met either by demonstrating a reading ability in German, French, Russian, or Japanese or by satisfactorily completing courses in computer science and statistics. The student must defend the thesis orally at a public meeting of his or her advisory committee. The average period of study for the Ph.D. degree is four years.

Qualified applicants must apply at least two weeks prior to the quarter in which admission is sought. Most students enter the chemistry program in the fall quarter. Entry during the academic year is possible although not generally encouraged. Although there is no formal deadline for applications for financial aid, early application is strongly recommended.

500 Advanced Organic Laboratory (4)

Prereq: perm. Advanced lab techniques and instrumentation.
Staff; Sp.

501 Organic Chemistry Survey (5)

520 Chemical Literature (4)

Prereq: reading knowledge of German. Chemical literature in journals, handbooks, monographs, and patents. Scientific writing.

530 Introduction to Toxicology (5)

Prereq: 302 or 307. Introduction to chemical, clinical, environmental, and forensic aspects of toxicology, types of poisons, how poisons act, treatment of acute poisoning, and control of poisonous materials.

545 Chemistry of Photography (5)

Prereq: grad rank in *photography*. Basic chemistry of modern and historical photographic and photomechanical materials and processes. 2 lec, 4 lab.

550 Principles of Quantum Chemistry (4)

Prereq: perm. Introduction to solution of problems concerning molecular structure and spectroscopy in terms of quantum theory.

551 Physical Chemistry (5)

Prereq: perm. For graduate students not majoring in chemistry. Includes thermodynamics, thermochemistry, equilibrium, solutions, electrochemistry, and kinetics.

553 Physical Chemistry (4)

Prereq: 143, MATH 263C, PHYS 253 (Not open to chemistry majors). Calculus-based study of thermodynamics with applications to chemical equilibria.

554 Physical Chemistry (4)

Prereq: 553 (Not open to chemistry majors). Continuation of 553. Thermodynamics of ionic solutions, electrochemical cells and surfaces. Kinetic theory of gases. Chemical kinetics.

555 Physical Chemistry (4)

Prereq: 554 (Not open to chemistry majors). Continuation of 554. Introductory quantum theory of simple systems with applications to molecular structure and bonding. Applications to various spectroscopies including infrared, ultraviolet, nuclear magnetic resonance, and electron spin resonance.

558 Chemical Thermodynamics (4)

Prereq: perm. Concepts of energy and entropy and their use in predicting the feasibility and extent of chemical reactions.

560 Spectroscopic Methods in Organic Chemistry (4)

Prereq: perm. Modern spectroscopic methods as employed in organic chemical research: NMR, IR, UV, ESR, and mass spectrometry.

571 The Physical Chemistry of Macromolecules (4)

Prereq: 454 or perm. Effects of structure and molecular weight on physical and chemical properties of macromolecules. Topics include molecular weight distribution, solubility, polymer conformation, different types of polymers, synthesis, and reactions. Both synthetic and natural polymers considered.

576 Modern Inorganic Chemistry (5)

Relationship between physical and chemical properties of inorganic substances and nature of bonding and structures involved.

577 Synthetic Methods of Inorganic Chemistry (3-5)

Prereq: 576. Theoretical principles and practices of synthesis, purification, and characterization of inorganic substances. 1 lec, 3-6 lab.

579 Radiochemistry (5)

Prereq: perm. Application of radiation and radioactive isotopes to problems in chemistry and environmental sciences; detection and determination of radiation; safe handling and disposal of radioactive materials and other problems in environmental radiation safety.

580 Advanced Organic Chemistry (5)

Structural theory, stereochemistry, reactive intermediates, and reaction mechanisms.

583 Chemical Separation Methods (5)

Modern methods of separating components of complex mixtures with emphasis on their operation and application in analytical chemistry. Topics will include liquid-liquid extraction, partition chromatography, ion-exchange, gas chromatography, high performance liquid chromatography, exclusion chromatography, and electrophoresis. 3 lec, 3 lab.

584 Electrochemical Methods of Analysis (7)

Prereq: 551 or 553. Modern electrochemical techniques and instrumentation with emphasis on their applications in analytical chemistry. Topics include potentiometry, specific ion electrodes, DC and AC polarography, pulse polarography, coulometry, chronocoulometry, cyclic voltammetry, and rapid scan voltammetry.

585 Spectrochemical Methods of Analysis (7)

Prereq: 551 or 553. Survey of spectrochemical instrumentation with emphasis on their operation and application in analytical chemistry. Topics include atomic absorption, atomic emission, molecular absorption, and molecular emission; and will cover emission-absorption phenomena in X-ray, ultraviolet, visible, and infrared regions of electromagnetic spectrum.

586 Advanced Analytical Chemistry (5)

Fundamental principles of instrumental analysis. Electrochemistry, with emphasis on potentiometry; atomic and molecular spectroscopy; gas and liquid chromatography.

587 Forensic Chemistry (5)

Prereq: 484 and 485. Survey of chemical problems most frequently encountered in crime lab and their currently acceptable solutions, as well as special techniques not covered in other analytical chemistry courses. 3 lec, 3 lab.

588 Chemical Instrumentation (5)

Prereq: perm. Fundamentals of electronics, emphasizing circuitry in modern chemical instruments. 3 lec, 3 lab.

589 Basic Biochemistry (5)

Prereq: 302 or 307 or perm. Survey course, including introduction to biochemical concepts and techniques, metabolic pathways, and information storage and transmission, with emphasis on directions of current biochemical research.

Staff; Sp.

589L Biochemistry Laboratory (3)

Prereq: with or following 589 or 591, or perm. Modern biochemical lab techniques including chromatography, electrophoresis, measurement of enzyme kinetics and oxidative phosphorylation, amino acid analysis.

Staff; W.

590 Introduction to Biochemistry (4)

Prereq: perm. Structure and function of major biological macromolecules.

591 Introduction to Biochemistry (4)

Prereq: 590. Bioenergetics, metabolism, and metabolic control systems.

592 Introduction to Biochemistry (4)

Prereq: 591. Study of integrated molecular systems in biology.

695 Research and Thesis (as recommended by dept) (1-15)

700 Research Techniques (4)

Prereq: perm. Important skills and techniques of chemical research including glassblowing, vacuum techniques, separation methods, etc.

701 Advanced Organic Chemistry (4)

Prereq: 580. Organic syntheses.

702 Advanced Organic Chemistry (4)

Prereq: 701. Theoretical aspects of organic chemistry.

703 Physical Organic Chemistry (4)

Prereq: 702. Application of modern concepts to structure and reactivity in organic reactions of various mechanistic classes.

704 Heterocyclic Chemistry (4)

Prereq: 702. Theoretical and synthetic aspects.

705 Organometallic Chemistry (4)

Prereq: 576. Structure and reactivity of organometallic compounds.

706 Natural Products Chemistry (4)

Prereq: 702. Terpenes, steroids, alkaloids, and other natural products.

710 Special Topics in Organic Chemistry (4)

Prereq: 702. Selected topics of current interest.

711 Protein Chemistry (4)

Topics and techniques relevant to thorough understanding of current status of protein chemistry and enzymology. Includes isolation, purification, and characterization of proteins by standard techniques, active center characterization, and physicochemical features of proteins.

712 Biophysical Chemistry (4)

Presentation of physical aspects of polymer chemistry relevant to biochemistry and exploration of techniques, and concepts attendant to these methods.

713 Bioenergetics and the Structure and Function of Biological Membranes (4)

Thermodynamic treatment of membrane structure, analytical techniques for examining membranes and role of membranes in energy metabolism of living systems.

714 Control and Regulation in Molecular Biology (3)

Current concepts in chromosomal structure and function, genetic control of transcription, translation control of protein synthesis, control of enzymatic activity by noncovalent and covalent protein modifications.

715 Advanced Special Topics in Biochemistry (3)

Prereq: 590 or perm.

Staff.

726 Electroanalytical Chemistry (5)

Prereq: 584. Fundamentals and applications of potentiometry, conductometric titrations, coulometry, voltammetry, amperometric titrations, cyclic voltammetry, chronocoulometry. 3 lec, 3 lab.

727 Spectrochemical Analysis (5)

Prereq: 585. Modern instrumental methods of molecular spectroscopy including Raman, Fourier transform IR and NMR, circular dichroism, and mass spectroscopy; recent methods of atomic spectroscopy including plasma sources, diode arrays, and television spectrometers; impact of computerization.

730 Special Topics in Analytical Chemistry (4-5)

Selected topics of current interest: electronics, optical rotatory dispersion, circular dichroism, Fourier transform spectroscopy, photoelectron spectroscopy, chemical ionization mass spectrometry.

750 Chemical Thermodynamics (4)

Application of thermodynamics to mixtures and solutions to take account of solvent-solute interaction and ionic effects.

751 Statistical Thermodynamics (4)

Prereq: 558 or perm. Derivation of thermodynamic principles and data from knowledge of size and shape of molecules and laws of mechanics.

753 Chemical Applications of Group Theory (5)

Develops foundations for application of elementary group theory to organize or simplify problems in quantum chemistry. Applications include molecular orbitals, molecular vibrations, and ligand field environments.

754 Chemical Quantum Mechanics (4)

Prereq: 550. Perturbation and variation theory with application to quantum chemistry; angular momentum; electron spin; atomic structure. Some matrix theory.

755 Special Topics in Quantum Chemistry (4)

Prereq: 550. Compares various current approaches to molecular orbital calculations in quantum chemistry. Course varies in alternate years: ligand field theory or Hartree-Fock-Roothaan molecular orbital theory (either *ab initio* or semiempirical).

756 Solutions (4)

Selected topics in solution thermodynamics such as stoichiometry, determination of equilibrium constants, activity coefficients and other thermodynamic properties of solutions, theories of electrolytes, electrochemistry, and transport phenomena.

757 Chemical Kinetics (4)

Experimental methods of obtaining reaction rates, interpretation of rate data, and relationships between mechanism of reactions and rate equations of reactions.

758 Solid State Chemistry (5)

Prereq: 550. Geometrical crystallography and structure of crystals; imperfections and mechanical properties; crystal growth; phase diagrams; electrical, optical, thermal, and magnetic properties of solids; diffusion and solid state reactions.

759 Crystallography (4-6)

Point and space groups; X-ray spectra; diffraction phenomena; reciprocal lattice; powder, precession, Weissenberg and counter methods of recording spectra; crystal structure determination.

760 Magnetochemistry (4)

Examination, analysis, and formulation of selected magnetic phenomena; including magnetic susceptibility, magnetic materials, magnetic resonance, and magnetothermodynamics.

761 Molecular Structure I (4)

Prereq: 550. Theoretical principles of rotational, vibrational, and electronic spectra of diatomic and polyatomic molecules.

762 Molecular Structure II (4)

Prereq: 550. Theoretical principles of nuclear magnetic resonance and electron spin resonance spectroscopy.

763 Radiation and Photochemistry (4)

Comparison of radiation and photochemical reactions; primary and secondary processes; general treatment of free radical mechanisms; isolation and detection of free radicals; radiation dosimetry; chemical and biological effects of radiation.

764 Special Topics in Physical Chemistry (3-4)**775 Theoretical Inorganic Chemistry (4)**

Prereq: 550, 576. Theoretical principles underlying physical and chemical behavior of inorganic substances.

776 Chemistry of the Representative Elements (4)

Prereq: 576. Descriptive chemistry of A-group elements.

777 Chemistry of Transition Elements (4)

Prereq: 775. Descriptive chemistry of transition elements and their coordination compounds.

778 Chemistry of Heavy Elements (4)

Prereq: 775. Descriptive chemistry of lanthanides, actinides, and selected heavy metals.

779 Physical Methods of Inorganic Chemistry (4)

Prereq: 775. Modern methods of study of structure and properties of inorganic substances.

790 Special Topics in Inorganic Chemistry (3-4)**891 Inorganic Chemistry Seminar (2)**

Required of inorganic chemistry majors.

892 Organic Chemistry Seminar (2)

Selected topics from current literature presented by participating students and staff.

893 Analytical Chemistry Seminar (2)

Required of analytical chemistry majors.

894 Physical Chemistry Seminar (2)

Required of physical chemistry majors.

895 Doctoral Research and Dissertation (as recommended by dept) (1-15)

CHILD DEVELOPMENT

(See Home Economics)

CHINESE

(See Foreign Languages and Literatures)

CIVIL ENGINEERING

(See Engineering, Civil)

CLASSICAL LANGUAGES

(See Foreign Languages and Literatures)

COMMUNICATION

(See Journalism, Interpersonal Communication, Mass Communication, or Telecommunications)

COMPARATIVE ARTS

DOCTORAL PROGRAM

The Ph.D. program in comparative arts is an academic program of liberal, humanistic study in the arts of western civilization. Fundamental emphasis is placed on the ability to deal with works of arts on their own terms; that is, the competence to analyze a work in any basic medium utilizing the procedures of accepted modes of analysis within the scholarly tradition of each artistic discipline. But, as our name implies, departmental work is further focused upon the exploration of relationships between works of art and their significant cultural and intellectual contexts. There is no intention in this program to present the student with a choice between scholarship and creative expression. Instead, the program is based on the belief that, for the creative individual, knowledge and understanding of his or her heritage and the development of acute critical abilities can only enhance the creative spirit, not hinder it.

Degree work is thus structured around an historical-theoretical-critical bias involving period studies in each of the basic artistic disciplines as well as interdisciplinary seminars.

Admission Requirements

A candidate for admission to the program should have completed a master's degree from a reputable, accredited university. This program of study may be in the historical and critical studies of any one of the major art disciplines or may be in studio or performance fields. Students whose master's degree training is in modern languages, literature, history, or philosophy and who have interest in and some training in arts fields are also encouraged to apply.

Applications for admission should include:

1. Official transcripts of all previous degree work.
2. At least three letters of recommendation from persons qualified to speak of the academic achievement and potential of the applicant.
3. A three- to five-page essay in which the applicant discusses reasons for selection of interdisciplinary work for a graduate degree and a statement of philosophical and practical expectations from such study.
4. Graduate Record Examination scores for the Quantitative and Qualitative Aptitude tests, or the Miller Analogies Test.

When at all feasible, the department further recommends a personal interview with each applicant.

Most admissions to the comparative arts program are for fall entry, the beginning of the academic year. For such consideration an applicant is advised to submit all application materials by the beginning of the previous March, as basic admissions decisions for the ensuing year are generally made by the middle of the previous April. Applications for admission at other times of the year should be complete and in the hands of the departmental graduate committee not less than three months prior to the beginning of the quarter for which admission is requested.

Program Requirements

The basic curriculum for the degree consists of the following:

1. Historical-Theoretical studies: From the arts of theater, music, painting, sculpture, architecture, etc., two will be selected as areas of concentration requiring a minimum of six courses in each. In two areas not selected as areas of concentration, a minimum of one course is required.

2. Seminar: A full cycle of the Seminar in Comparative Arts, consisting of all six courses, is required.
3. Academic Minor: A minimum of three courses in the social sciences or humanities is required (areas such as history, literature, philosophy, psychology, etc.). (Students whose prior graduate training has included work in one of these areas may petition to transfer sufficient credits to waive this requirement.)
4. Studio Minor: A minimum of three studio or performance courses is required. (Students whose prior graduate training included studio or performance work may petition to transfer sufficient credits to waive this requirement.)

A student is also required, as a part of the total program, to demonstrate proficiency in at least two scholarly tools outside of, but related to, his or her areas of concentration as determined by the graduate committee of the department. The choice is to be made from the following:

1. A reading knowledge of two foreign languages.
2. A reading knowledge of one foreign language plus at least three graduate courses in the literature of that language.
3. A reading knowledge of one foreign language plus satisfactory competence in a related tool (music theoretical systems, statistics, etc. The music theoretical systems option is not open to students with graduate training in a music area.)

Upon petition, the department will accept test scores from the Educational Testing Service which demonstrate reading proficiency in a foreign language provided the test score is at least 600 and no more than three years old.

Minimum course requirements for the degree may ordinarily be completed in six to eight quarters of full-time residency, of which a minimum of three quarters must be continuous. Toward the end of the student's sixth full quarter of study, or when the coursework is virtually completed, and upon recommendation of the graduate committee of the department, the student must take a comprehensive examination. In this examination the student must demonstrate the ability to make historical, philosophical, and comparative analyses of works of art.

In addition to the requirements stated above, all candidates for the Ph.D. degree in comparative arts must register for six quarters of Seminar in Comparative Arts (895). All candidates for the degree are also required to teach and/or engage in some performance activity as determined and supervised by the department.

A dissertation (and oral defense) which is comparative in nature is the culminating demonstration of a candidate's scholarly abilities.

Requests for financial aid may accompany applications for admission, but applicants should understand that most graduate teaching associateship appointments are made for a nine-month academic year period beginning in the fall quarter.

520X Problems in Comparative Arts (The Fine Arts in Florence) (1-6)

Prereq: enrollment in Ohio University in Italy program. Artistic expression in Florentine life as it may be seen in examples of architecture, painting, sculpture, and music.

Staff; Sp; Y.

581 Individual Problems (1-6)

Prereq: perm.

Staff; F, W, Sp, Su; Y.

581X Individual Problems (1-6)

Prereq: perm; study abroad.

Staff; Sp; Y.

700 Teaching Seminar in Comparative Arts (4)

Prereq: CA grad students. Seminar-practicum designed to prepare TA. for assumption of classroom responsibilities. Examines content, method, audio-visual materials necessary to teaching of *Introduction to Fine Arts* sequence. (CA 117, 118).

Timmis; F; Y.

701 Music Theory Systems (4)

For nonmusician graduate students, introducing musical theoretical systems c. 300 B.C. to present.

Wortman; F; Y.

702 Music Theory Systems (4)

Prereq: 701. For nonmusician graduate students, introducing musical theoretical systems c. 300 B.C. to present.

Wortman; W; Y.

703 Music Theory Systems (4)

Prereq: 702. For nonmusician graduate students, introducing musical theoretical systems c. 300 B.C. to present.

Wortman; Sp; Y.

711 Music in Antiquity and the Middle Ages (4)

Cultural history of music to c. 1410.

Wortman; F; A.

712 Music in the Renaissance (4)

Cultural history of music c. 1410-c. 1600.

Wortman; W; A.

713 Music in the Baroque Period (4)

Cultural history of music c. 1600-c. 1730.

Wortman; Sp; A.

714 Music in the Classic Period (4)

Cultural history of music c. 1730-c. 1825.

Wortman; F; A.

715 Music in the 19th Century (4)

Cultural history of music in 19th century.

Wortman; W; A.

716 Music in the 20th Century (4)

Cultural history of music in 20th century.

Wortman; Sp; A.

721 The Arts in Antiquity (4)

Prereq: grad rank; perm. Artistic development between Minoan Helladic cultures to advent of Constantine.

Murray; F; A.

722 Medieval Art (4)

Art of Europe from Age of Constantine to Art of Giotto.

Murray; W; A.

724 Northern Renaissance Art (4)

Art of Northern Europe in 15th and 16th centuries.

Murray; Sp; A.

725 Italian Renaissance and Mannerist Art (4)

Prereq: grad rank; perm. Art and history of Quattrocento, Cinquecento Italy.

Staff; S; A.

726 Baroque and Rococo Art (4)

Art of 17th and 18th century Europe.

Staff; F; A.

727 Art of 19th Century (4)

European art from French Revolution to 1900.

Staff; F; A.

728 Modern Art (4)

Specific movements and artists since 1900.

Staff; W; A.

729 Arts of the United States (4)

Art in the U.S. from the Colonial period.

Schwindler; Sp; A.

730 Arts of the Orient (4)

Art of India, China, Japan.

Schwindler; F; A.

731 Pre-Columbia Art (4)

Preconquest art of Mexico, Central and South America.

Perani; W; A.

732 African Art (4)

Traditional art of West and Central Africa.

Perani; W; A.

733 Ancient Near Eastern Art (4)

Art of Egypt, Mesopotamia, Assyria, and Babylonia.

Staff; W; A.

734 Seminar in Film I (4)

(For course description, see listing under FILM 633.)

Lehman; F; Y.

735 Seminar in Film II (4)

Continuation of 734. See 734 for description.

Lehman; W; Y.

736 Seminar in Film III (4)

Continuation of 734 and 735.

Lehman; Sp; Y.

737 History of Photography (4)

Photography as art, science, and industry. Leading photographers and their contributions. 3 lec.

Gassan; F; Y.

738 History of Photography (4)

Continuation of 737. See 737 for description.

Gassan; W; Y.

740 History of Photography (4)

Continuation of 738. See 737 for description.

Gassan; Sp; Y.

750 Architectural Theory and Practice (4)

Prereq: Graduate rank and perm of instructor. Selected topics in architectural theory and criticism.

Harper; Su; D.

751 Architecture of Greece and Rome (4)

Shaping of architecture of classical world by social, religious, climatic, and technical influences, from Mycean to Early Christian periods.

Harper; F; A.

752 Medieval Architecture (4)

Selected topics in medieval architecture.

Harper; W; A.

753 Renaissance Architecture (4)

Selected topics in renaissance architecture.

Harper; Sp; A.

754 17th and 18th Century Architecture (4)

Selected topics in 17th and 18th century architecture.

Harper; F; A.

755 19th Century Architecture (4)

American and European architecture during 19th century.

Harper; W; A.

756 20th Century Architecture (4)

American and European architecture during 20th century.

Harper; Sp; D.

770 Greek Theater and Drama (4)

First in series of 8 seminars covering in-depth theater and drama of western world from prehistoric times to contemporary.

Conover; F; Y.

771 Roman and Medieval Theater (4)

3 lec.

Conover; W; Y.

772 Renaissance Theater and Drama (4)

Conover; Sp; Y.

773 Restoration and 18th Century Theater (4)

Quinn; D.

774 Baroque European Theater (4)

3 lec.

Quinn; F; Y.

775 19th Century European Theater (4)

3 lec.

Quinn; W; Y.

776 Contemporary Theater (4)

Quinn; Sp; Y.

777A American Theater and Drama, 18th and 19th Century (4)

Prereq: perm. Intensive study in some aspect of early American theater history or drama.

Kaufman; F; Y.

777B American Theater and Drama, 1900-1945 (4)

Prereq: perm. Intensive study in some aspects of new American theater and drama.

Kaufman; W; Y.

777C American Theater and Drama, 1945 to Present (4)

Prereq: perm. Intensive study in some aspect of post-WW II American theater and drama.

Kaufman; Sp; Y.

778 Seminar in Dance History and Criticism (4)

Contemporary directions in dance, function of dance as art, ritual, and social activity; its development as spectacle and entertainment. Research projects.

Wimmer; F; Y.

779 Seminar in Dance History and Criticism (4)

Selected dance cultures of world. Function of dance in society and its relation to other arts. Research projects.

Wimmer; W; Y.

780 Seminar in Dance History and Criticism (4)

Continuation of 778-779. See 778-779 for description.

Wimmer; Sp; Y.

881 Individual Problems (1-15)*Staff; F, W, Sp, Su; Y***881X Individual Problems (4-15)**

Prereq: study abroad.

*Staff; Sp; Y***890 Fine Arts Historiography (4)**

Readings in 4 areas of fine arts. Research and bibliographical skills emphasized.

*Murray; F; Y***891 Seminar in Comparative Arts (4)***Staff; F, W, Sp, Y***895 Dissertation (as recommended by dept) (1-15)***Staff; F, W, Sp, Su; Y*

COMPUTER SCIENCE

The Department of Computer Science does not offer an advanced degree program. However, a student who wishes to study computer science at the graduate level may apply credit for the courses listed below (except 521, 522, and 599) in a master's degree in mathematics. (See Mathematics)

Courses 521, 522, and 599 are offered to provide programming instruction for graduate students who wish to use the computer as a research tool in various disciplines.

500 Introduction to Discrete Structures (5)

Prereq: grad rank. Review of set algebra including mappings and relations. Algebraic structures including semigroups and groups. Elements of theory of directed and undirected graphs. Boolean algebra and propositional logic. Applications of these structures to various areas of computer science.

504 Design and Analysis of Algorithms (5)

Prereq: 561. Correctness of algorithms. Analysis of efficiency of algorithms — recurrence relations, worst-case and best-case behavior, average-case behavior. Design of algorithms: divide-and-conquer and balancing, greedy method, graph searching, dynamic programming, backtracking, branch-and-bound and preprocessing techniques.

506 Computation Theory (5)

Prereq: 500 and PHIL 520. Algorithms, recursive functions, Turing machines, decidability.

510 Formal Languages and Syntactic Analysis (5)

Prereq: 520 and 561. Definition of formal grammars; arithmetic expressions and precedence grammars, context-free and finite-state grammars. Algorithms for syntactic analysis; recognizers, backtracking, operator precedence techniques. Semantics of grammatical constructs: reductive grammars. Floyd productions, simple syntactical compilation. Relationship between formal languages and automata.

520 Organization of Programming Languages (5)

Prereq: grad rank. Formal definition of programming languages including specification of syntax and semantics. Simple statements including precedence, infix, prefix, and postfix notation. Global properties of algorithmic languages including scope of declarations, storage allocation, grouping of statements, binding time of constituents, subroutines, coroutines, and tasks. List processing, string manipulation, data description, and simulation languages. Run-time representation of program and data structures.

521 Computing for Engineers and Scientists (5)

Prereq: grad rank and differential equations. Principles and practice of computer solution of problems involving extensive numerical calculations as found in physical sciences, engineering, and numerical mathematics.

522 Computing with Statistical Packages (5)

Prereq: grad rank and statistics. Approximately half of course devoted to programming solutions to problems using FORTRAN, PASCAL, or PL/1. Emphasis on problem analysis, syntax, testing, and debugging of computer solutions to problems. Second half devoted to study of use of statistics packages as SPSS for solution of statistical problems encountered in study of social, biological, and educational sciences.

540 Computer Organization (5)

Prereq: grad rank. Organization of digital computer. Data representation and internal transfer. Digital arithmetic logic unit, con-

trol section, and timing. Input-output devices and channels. Software-hardware interfaces.

542 Operating Systems and Computer Architecture I (5)

Prereq: 540. Review of batch process systems programs, their components, operating characteristics, user services, and their limitations. Implementation techniques for parallel processing of input-output and interrupt handling. Overall structure of multiprogramming systems on multi-processor hardware configurations. Details on addressing techniques, core management, file systems design and management, systems accounting, and other user-related services. Traffic control inter-process communication, design of system modules and interfaces. System updating, documentation, and operation.

544 Data Communications (5)

Prereq: 542. Introduction to theory and methodology of computer-to-terminal and computer-to-computer communications using telecommunications facilities. Topics considered: a) development of data transmission techniques for use on existing telephone network; b) standards and protocols for orderly control of data links between processors; c) software for support of data transmission.

551 Modeling and Analysis of Computer Systems I (5)

Prereq: 542 and MATH 550B. Computer systems characterized by hardware, software, and operating environment. Models of portions or functions of batch, time-sharing, or real-time computer systems developed and analyzed. Simulation, queuing, scheduling methods and probability, and statistics used as tools.

552 Modeling and Analysis of Computer Systems II (5)

Prereq: 551. Continuation of 551.

556 Software Design and Development (5)

Prereq: 520, and CS 561. Review of program language structures, translation, loading, execution, and storage allocation. Compilation of simple expressions and statements. Organization of compiler including compile-time and run-time symbol tables, lexical scan, syntax scan, object code generation, error diagnostics, object code optimization techniques, and overall design.

558 Operating Systems and Computer Architecture II (5)

Prereq: 542. Continuation of 542. Assembler language programming of system control functions: interrupt handling, virtual storage management, multiprocessing, clocks, CPU/channel states. PDP 11, IBM/370 or multi-user microcomputer systems studied.

561 Data Structures (5)

Prereq: 500. Basic concepts of data. Linear lists, strings, arrays, and orthogonal lists. Representation of trees and graphs. Storage systems and structures, and storage allocation and collection. Multilinked structures. Symbol tables and searching techniques. Formal specification of data structures, data structures in programming languages, and generalized data management systems.

562 Files and Data Bases (5)

Prereq: 561. Continuation of 561. Data structures, covering file structures and data bases. Random, indexed sequential, inverted and multilist file structures; concepts of data models, data language, data security, and data integrity. Organization, storage, search, and retrieval methods of hierarchical, network, and relational data models discussed.

564 Information Organization and Retrieval (5)

Prereq: 562. Structure of semiformal languages and models for representation of structured information. Aspects of natural language processing on digital computers. Analysis of information content by statistical, syntactic, and logical methods. Search and matching techniques. Automatic retrieval systems, question-answering systems. Production of secondary outputs. Evaluation of retrieval effectiveness.

568 Data Base Design (5)

Prereq: 542 and 562. Continuation of 562. Objectives and architecture of generalized database management system (GDBMS). Models of GDBMS' hierarchical, network and relational. Data definition and data manipulation in GDBMS. File organization in GDBMS. External sorting of large databases. Survey of some commercial GDBMS. Additional selected topics.

580 Artificial Intelligence (5)

Prereq: 520 and 561. Definition of heuristic versus algorithmic methods, rationale of heuristic approach, description of cognitive processes, and approaches to mathematical invention. Objectives of work in artificial intelligence, simulation of cognitive behavior, and self-organizing systems. Heuristic programming techniques including use of listprocessing languages. Survey of examples from representative application areas. Mind-brain problem and

nature of intelligence. Class and individual projects to illustrate basic concepts.

581 Information Organization and Retrieval Projects (5-15)

Prereq: 556, 564, and instructor's perm. Project course in information organization and retrieval. Each student must complete a project successfully and present results. Lectures by instructor and guest speakers.

590 Special Problems in Computer Science (5-15)

Prereq: grad rank. Special project in 1 of various subfields of computer science or application area studied, investigated, and/or solved by individual student or small group working in close relationship with instructor. Suitable problems might include construction of compiler for special purpose artificial language, perfection of computer code to solve some significant problem, or study of coherent subfield of computer science. May be repeated for credit.

599 Elementary Topics in Computer Science (1-15)

Prereq: grad rank. Special topics omitted in student's undergraduate preparation for graduate study. May be repeated for credit.

DANCE

The School of Dance does not offer an advanced degree program at present. However, a student may include the following graduate courses in an individual interdisciplinary program of study culminating in a master of fine arts degree through the College of Fine Arts.

See also the Comparative Arts section of this bulletin.

531 Analysis of Dance Movement (2)

Prereq: perm. Explores skeletal alignment and deviation, muscular development and function, and mechanical efficiency in production of dance movement. Basic to course study is thorough understanding of principles of stability and motion as they relate to dance.

Scott.

532 Dance Kinesiology Seminar (2)

Prereq: perm. Offers study and indepth analysis of kinesiological principles, their application in dance class and to training of dancers.

Scott

690 Independent Study (1-10)

Prereq: perm.

778 Seminar In Dance History and Criticism (4)

Contemporary directions in dance, function of dance as art, ritual, and social activity; its development as spectacle and entertainment. Research projects.

Wimmer, F; Y

779 Seminar In Dance History and Criticism (4)

Selected dance cultures of world. Function of dance in society and relation to other arts. Research projects.

Wimmer, W; Y

780 Seminar In Dance History and Criticism (4)

Continuation of 778-779. See 778-779 for description.

Wimmer, Sp, Y

ECONOMIC EDUCATION

(See Education, Curriculum and Instruction, Economic Education)

ECONOMICS

A student beginning graduate work in the field of economics should ordinarily have some undergraduate training which includes courses in the social sciences or business administration. However, a wide variety of areas of concentration relate to or provide appropriate background knowledge for advanced study in economics.

Undergraduate courses in principles of economics, statistics, intermediate micro and macro theory, and some quantitative ori-

entation will ordinarily be deemed prerequisites for graduate work in this area, although a student may be permitted to make up these deficiencies while pursuing a graduate program. In every case the student's undergraduate program must be approved by the department admissions committee prior to the beginning of graduate work. Applicants are urged to take the Graduate Record Examination and submit scores with their applications.

It is preferable that students enter the program during the fall quarter. However, it is possible to begin studies in the winter or spring quarters. For financial assistance it is advisable to apply before March 1.

All students seeking the master of arts degree are required to 1) complete a core requirement composed of Advanced Microeconomic Theory (603), Advanced Macroeconomic Theory (604), and Methodology of Economics (685); 2) concentrate in business economics, or public policy analysis, or economic development and history by completing five courses in the selected area of concentration; 3) complete a research paper in a topic within the area of concentration. Additional elective courses may then be used to complete the required 50 graduate credits hours.

500 Mathematical Economics Foundations (4)

Prereq: grad rank; perm. Introduction to differential calculus, integral calculus, and linear algebra with economic and business models and applications. Same as QM 500.

Shukla or Koshal; F; Y; 1982.

501 Statistical Foundations (4)

Prereq: grad rank; perm. Introduction to probability theory, statistical distributions, sampling, estimation, testing, and decision theory for economics and business administration.

Shukla, Koshal, or Soltow; F; Y; 1982.

503 Fundamentals of Economics (4)

Prereq: grad rank; perm. Analysis of prices, markets, production, wages, interest, rent, and profits.

Staff; F, W, Sp; Y; 1982.

503W Fundamentals of Economics (3)

Prereq: grad rank; perm. Analysis of prices, markets, production, wages, interest, rent, and profits. Accelerated workshop course for M.B.A. students.

Staff; Su, D; 1982.

504 Fundamentals of Economics (4)

Prereq: grad rank; perm. Factors determining level of nation's economic activity and growth and stability in nation's economy.

Staff; F, W, Sp; Y; 1982.

504W Fundamentals of Economics (3)

Prereq: grad rank; perm. Factors determining level of nation's economic activity and growth and stability in nation's economy. Accelerated workshop course for M.B.A. students.

Staff; Su, D.

506 Monetary Theory and Policy (4)

Prereq: grad rank; perm. Use of economic theory to formulate monetary policy for minimizing cyclical fluctuations in economic activity.

Klingaman; W; D; 1981.

507 History of Economic Thought (4)

Prereq: grad rank; perm. Major economic doctrines: mercantilists and cameralists, physiocrats, Adam Smith and classical school, historical school, Austrian school, Alfred Marshall, and neoclassicists.

Staff; F; Y; 1982.

508 Modern Economic Thought (4)

Prereq: grad rank; perm. Contributions to economics of most significant writers since Alfred Marshall.

Staff, W; Y

509 Institutional Economics (4)

Prereq: grad rank; perm. Veblen, Commons, Ayers, and other modern dissenters from traditional economic thought. Technological progress and institutional adjustment, influence on contemporary theory and policy.

Staff, F; D

510 Urban Economics (4)

Prereq: grad rank; perm. Application of economic analysis to urban problems: urban economic growth and structure (location patterns, land use and environment, urban transportation, and housing); human resources in urban economics and the public sector in a metropolitan context.

Ghazalah or Peterson, F, Y, 1981

511 Inequality of Personal Wealth and Income (4)

Prereq: grad rank; perm. course in statistics. Quantitative and qualitative differences in wealth and income between low, middle, and high income groups in society using historical, statistical, and mathematical techniques.

Soltow; W; D.

512 Economics of Poverty (4)

Prereq: grad rank; perm. Incidence, causes, and consequences of poverty in affluent society. Economic theory, history, statistics applied to analysis of poverty-reduction measures.

Galloway; W; Y; 1982.

513 Economics of the Environment (4)

Prereq: grad rank; perm. Economic analysis of such environmental matters as air, water, and noise pollution; population growth; and land use. Emphasis placed on use of economic theory and empirical research in evaluating environmental policies.

Koshal; W; Y; 1981.

515 Economics of Health Care (4)

Prereq: grad rank; perm. Allocating resources to health care, economics of hospital care, solution of health care problems, paramedics, prepaid plans, malpractice problems.

Hewins or Koshal; Sp; 1982.

520 Labor Economics (4)

Prereq: grad rank; perm. Economic forces generating modern labor problems: history of labor movement, labor in politics, labor-management relations, wages, full employment.

Levinson; W; Y; 1982.

521 Labor Legislation (4)

Prereq: grad rank; 520 or perm. Law bearing upon labor problems; labor relations legislation, old-age and unemployment insurance, workmen's compensation, wages-and-hours legislation.

Levinson; F; Y; 1982.

522 Economics of Human Resources (4)

Prereq: grad rank; perm. Current development in theory, empirical research and policy with respect to investment in human resources, economic value of education, manpower programs, and growth.

Galloway; Sp; Y; 1982.

525 Public Policy Economics (4)

Prereq: grad rank; perm. Survey of economics approach to analyzing public policy issues, uses concepts of welfare economics, public choice economics, and cost-benefit analysis, as applied to samples of policy subjects.

Ghazalah or Peterson; F; Y; 1982.

530 Public Finance (4)

Prereq: grad rank; perm. Role played by government as user of economic resources and redistributor of income; need for government's entry into economy, optimal size of government, selection of tax and expenditure schemes, and effects of government economic activity on the private sector.

Ghazalah; Sp; Y; 1982.

531 Economics of Transportation (4)

Prereq: grad rank; perm. Economics of transport pricing, regulation of transport, and national transport policy.

Koshal; W; D.

532 Industrial Organization (4)

Prereq: grad rank; perm. Social consequences of monopoly and competition, policy prescriptions dealing with economic concentration and market structure. Impact on United States business, and government regulation of business.

Hewins; Sp; Y; 1982.

533 Government and Agriculture (4)

Prereq: grad rank; perm. American agriculture as an industry; economics of government policies and programs; consideration of forces and objectives in policy formation.

Deveau; D.

534 Public Utilities (4)

Prereq: grad rank; perm. Economic basis of public utility concept and its relation to business organization. Nature, scope, development, legal organization, and regulation of public utilities.

Levinson; Sp; Y; 1982.

535 Economics of Energy (4)

Prereq: grad rank; perm. Economic theory applied to energy policy issues in the U.S., including questions of sources of supply, conservation, pollution control, foreign dependence, monopoly control, special interests, and future generation equity.

Peterson; Sp; 1982.

540 International Trade Theory (4)

Prereq: grad rank; perm. Foundations of international trade theory; modern trade theory; applying trade theory; extending trade theory; protection, and factor movements; non-tariff barriers; trade and market structures.

Doroodian; F; Su; Y; 1982.

541 International Monetary System (4)

Prereq: grad rank; perm. International money and credit; foreign exchange market; exchange rate determination; speculation in foreign exchange market; government intervention in market; International Monetary Fund and its role in world financial system; case for and against exchange rate stabilization.

Doroodian; W; Y; 1982.

542 International Economic Policy (4)

Prereq: 540. Current economic developments of foreign and United States economic policy, including tariffs, controlled trade, international agreements, commercial treaties, foreign exchange control, clearing agreements, international liquidity controversy and contemporary balance of payments problems. Roles of institutions such as World Bank and International Monetary Fund discussed with emphasis on interaction of domestic and international goals and policies.

Doroodian; Sp; A; 1982.

550 Economic Development (4)

Prereq: grad rank; perm. Nature of, obstacles to and future possibilities for economic growth of nations; problems of underdeveloped countries; studies of selected countries.

Charlé, Deuster, or Shukla; F; Y; 1982.

551 Agricultural Development (4)

Prereq: grad rank; perm. Patterns of agricultural development in U.S. and selected foreign areas; technological and demographic changes in agriculture; socio-economic problems; marketing arrangements; case studies of specific agricultural development projects.

Deveau; D.

552 Economic History of the United States (4)

Prereq: grad rank; perm. Economic development of United States. Growth of banking, manufacturing, labor unions, and agriculture from colonial times to present.

Vedder or Klingaman; F; W; Y; 1982.

553 European Economic History (4)

Prereq: grad rank; perm. Economic growth of developed countries; industrial revolutions in Great Britain, France, Germany, Soviet Union, and Japan. Historical experiences of these countries related to various theories of economic change.

Vedder or Klingaman; Sp; Y; 1982.

554 Latin American Economic History (4)

Prereq: grad rank; perm. Fundamental assumption of course is that current problems of economic development of Latin America can be better understood if student has a solid knowledge of economic history of the region. Therefore, between one-half and two-thirds of course will cover economic history with emphasis on larger countries such as Brazil, Argentina, Chile, Peru, and Mexico. Particular attention given to legacies of the past which affect current foreign private investment, etc. In the latter part of course current problems will be discussed such as declining terms of trade, import substitution, urbanization, national and regional planning, etc.

Staff; 1981.

555 African Economic Development (4)

Prereq: 550. African societies as traditional economies and in process of modernization.

Charlé; Sp; Y; 1982.

556 Area Development (4)

Prereq: grad rank; perm. Analysis of industrial location and urban growth within regions in connection with community, state, and national planning. Consideration of national policies of aiding special regions, such as Appalachia or metropolitan central city. North-South issues in U.S. and in other nations.

Peterson; D.

561 Monetary History of the United States (4)

Prereq: grad rank; perm. Correlation of developments in American history with development of monetary institutions, policy, and theory. Evolution of commercial and central banking and relationship to economic activity in history of U.S.

Adie; D.

570 Comparative Economic Systems (4)

Prereq: grad rank; perm. Theoretical and institutional characteristics of capitalism and socialism with emphasis on prevailing economic systems in the U.S., England, and Russia.

Staff: F; A; 1982.

571 Economics of Planning (4)

Prereq: grad rank; perm. Major applications of economic planning to private and public planning; national, regional, local, centralized and decentralized planning. Procedures and techniques; organization, economic analysis, social accounting, input-output analysis, linear programming, location theory, industrial complex analysis; gravity, potential and spatial models, computers and planning; research and development.

Staff: D; 1979.

572 Economics of the Soviet Union (4)

Prereq: grad rank; perm. Operation of Soviet Union economy; allocation of resources; planning, saving, and investment; agriculture; public finance; price system; and international trade.

Staff: D.

573 Economics of Southeast Asia (4)

Prereq: 550 or perm. Economic characteristics, development problems, strategies and prospects of countries of Southeast Asia.

Deuster or Shukla; W; Y; 1982.

574 Economics of Latin American (4)

Prereq: 550 or perm. Economics of Latin American countries, prospects for economic development of the region, nature and origin of institutional obstacles to economic change. Economic heritage of colonial period and subsequent evolution of economic institutions, resources of the area and their utilization, and trends in economic activity and policy in post-WW II period.

Ghazalah; D.

575 The Chinese Economy (4)

Prereq: 550. China's early industrialization, 1880-1931; socialist transformation of each economic sector, 1949-1967; overall performance of Chinese economy and each economic sector, and Maoist revision of orthodox Marxist-Leninist economic doctrines.

Staff: D.

600 Managerial Economics (4)

Prereq: 303. Measuring economic relationships, analyzing market behavior, and examining some major economic decisions of business firm.

Staff: F; Y; 1982

603 Advanced Microeconomic Theory (5)

Prereq: 500 or perm. Consumer behavior, production and cost, behavior of firm in various types of markets (perfect competition, monopoly, oligopoly, etc.), factor pricing, general equilibrium, and welfare economics.

Staff: W; Y; 1982

604 Advanced Macroeconomic Theory (5)

Prereq: 500 or perm. National income accounting, development of static Keynesian model and comparison with classical model, consumption and investment functions and simple cycle and growth models (models constructed by Hicks, Kaldor, Domar, and Duesenberry).

Staff, Sp, Y, 1982

635 Econometrics I (4)

Prereq: 500. Applications of statistics to economics. Design and estimation of economic models. Estimation of simultaneous equation systems.

Shukla or Koshal W, Y, 1982

636 Econometrics II (4)

Prereq: 635, grad rank; perm. Problems of simultaneous equations: identification problems, indirect least squares, 2-stage least squares, limited information methods, full-information, and 3-stage least squares. Analysis of economic data such as multicollinearity, heteroscedasticity, lagged variables, and dummy variables. Projects involving econometric methods. (Same as QM 636).

Shukla or Koshal Sp, Y 1982

685 The Methodology of Economics (4)

Prereq: grad rank, perm. Economics as a scholarly discipline. Nature and role of theory in economics. Relationship between economic theory, hypothesis formulation and methods of empirical testing of hypotheses.

Staff F Y 1982

691 Seminar in Economics (2-6)

Prereq: grad rank; perm. Seminars in following general areas; theory and thought; growth and development; monetary and fiscal; theory and policy; labor and human resources.

Staff: D.

693 Readings in Economics (1-6)

Prereq: grad rank; perm. Readings in selected fields in economics under direction of staff member.

Staff: F, W, Sp, Su; Y; 1982.

696 Master's Seminar (4)

Prereq: grad rank; perm. Writing of scholarly papers in areas of economics. (Required of all master's candidates.)

Staff: F, W, Sp, Su; 1982.

697 Independent Research (1-12)

Prereq: grad rank; perm. Research in selected fields in economics under supervision of staff member.

Staff: F, W, Sp, Su; Y; 1982.

EDUCATION

Applied Behavioral Sciences and Educational Leadership

Educational Administration/Higher Education/College
Student Personnel Administration
Educational Research and Evaluation
Guidance and Counseling
Higher Education
Student Personnel

Curriculum and Instruction

Economic Education
Professional Laboratory Experiences

The College of Education offers graduate programs in the following areas:

Master of Arts

Economic Education

Master of Education (with emphases in)

Educational Administration
Elementary Education
Guidance and Counseling — elementary, secondary, community, rehabilitation, or human relations
Higher Education
Industrial Technology or Mathematics Education
Instructional Media
Secondary or Middle School Education
Special Education or Teaching of Talented and Gifted
Student Personnel Services
Supervision — elementary, secondary, or reading
Educational Specialists Certificate (Educational Administration or Guidance and Counseling)

Doctor of Philosophy (with emphases in)

Curriculum and Supervision
Economic Education
Educational Administration
Guidance and Counseling — college, community, elementary, secondary
Higher Education
Mathematics Education
Reading and Language Arts
Social Studies Education
Student Personnel Services

MASTER'S PROGRAMS

A student who wishes to major in a given area of education must have a program of study planned and approved by a faculty advisor to meet his or her future professional needs and objectives. Minimum number of credit hours varies from area to area depending on program requirements and standards for certification when applicable. Specific criteria for admission and require-

ments for various program areas are available upon request from the Office of Graduate Studies, College of Education.

Master's programs are offered in several areas of professional education. Specific areas of emphases are listed above. Additional information is included under the schools of Applied Behavioral Sciences and Educational Leadership and Curriculum and Instruction.

DOCTORAL PROGRAMS

Advanced preparations which may lead to the doctor of philosophy degree are offered in the School of Applied Behavioral Sciences and Educational Leadership and the School of Curriculum and Instruction. Processes for application and admission are listed under the two schools.

In addition to a major area of emphasis, a student may select, with the help of a doctoral program committee, other minor area(s) in professional and/or cognate fields within Ohio University.

A student admitted to the doctoral program is expected to apply for admission to advanced studies in education after two quarters of coursework. This admission is based upon review of the student's progress, faculty recommendations, completion of at least nine hours of course credit, and results of a qualifying examination.

Doctoral candidates are required to successfully complete two scholarly tools, a written and oral comprehensive examination, and an acceptable dissertation.

A student is assisted throughout his or her program of study by a faculty advisor and a doctoral program committee.

Specific information regarding criteria for admission, financial assistance, scholarships, etc., is available from the Office of Graduate Studies, College of Education.

Applied Behavioral Sciences and Educational Leadership

The School of Applied Behavioral Sciences and Educational Leadership prepares persons for professional positions in schools, colleges, and community agencies. Graduates function in a variety of roles including administration, supervision, counseling, consultation, teaching, and research. Programs are designed to meet state certification and licensure requirements where applicable, in addition to providing flexibility to meet specific student competency needs and interests.

Individuals who wish to pursue graduate study in the School of Applied Behavioral Sciences and Educational Leadership (SABSEL) must meet established graduate requirements and be accepted by the appropriate program faculty. There are two degree-granting programs within the school. Those two programs are: (1) Educational Administration, Higher Education, and Student Personnel Services; and (2) Guidance and Counseling. An applicant for a master's degree program who does not have a 2.7 overall (4-point scale) or a 3.0 on the last 90 quarter hours (4-point scale) will be required to submit a test score from the Graduate Record Exam (verbal and quantitative) or the Miller Analogies Test. Applicants for the doctoral program must submit the results of both the Graduate Record Examination (verbal, quantitative, and advanced education) and the Miller Analogies Test. An applicant for the Educational Specialists Program must possess a master's degree from an accredited institution of higher education. Applicants at all levels must submit letters of recommendation and autobiographies, and may be required to appear for interviews.

Anyone considering graduate work in SABSEL should arrange to complete the application process well in advance of the quarter in which he or she expects to begin study. Applicants who have not taken the Graduate Record Examination within the past five years should note that this examination is administered only on certain specified dates throughout the year and that the interval between administration and receipt of scores is ordinarily six weeks.

Students may apply for scholarships, graduate assistantships, and fellowships. All students accepted for graduate assistantships do research work or are assigned teaching responsibilities in the College of Education.

Further information regarding programs and admissions procedures may be obtained from the School of Applied Behavioral Sciences and Educational Leadership, McCracken Hall, Ohio University, Athens, Ohio 45701, or by calling 614/594-5406.

Educational Administration/Higher Education/College Student Personnel Administration

Programs are offered in educational administration leading to the educational specialist certificate and to the master of education and doctor of philosophy degrees. Students seeking certification may work toward the following administrative certificates: elementary principal, secondary principal, administrative specialist, and superintendent. The educational specialist certificate and the Ph.D. offer areas of specialization in: principalship, superintendency, business administration, and personnel administration. Also available at the Ph.D. level are specializations in higher education and research and evaluation.

Opportunities for specialization are provided to meet individual needs and to prepare for specific responsibilities in school systems, colleges and universities, state departments of education and related educational agencies.

The cooperative arrangements with other colleges of Ohio University make it possible for the student to pursue a wide range of interests and thus achieve a high degree of competence for a specific type of position.

Administration for the purpose of facilitating teaching, learning, and human development is the primary focus of master's and doctoral degree programs in this area. Although each area emphasizes specific institutional levels and specialties, mutual research, theory and practical applications strengthen the programs.

601 Introduction to Educational Administration (4)

Nature and critical tasks of educational administration, problems and issues, purposes, situational factors, processes; qualifications for the job, personal assessment, preparation, in-service training, professional opportunity, and challenge.

Staff; F, Sp, Su.

611 Educational Law (5)

Prereq: 601 or perm. Selected principles of constitutional, statutory, case, and common law affecting schools and school personnel with special reference to Ohio school law.

Staff; Y, Su, F.

621 Educational Finance (5)

Prereq: 601 or perm. Examination of economics and education; educational finance as type of public finance; theories, concepts, and issues related to programs designed to achieve equalization of educational opportunities; local, state, and federal programs of financial support for education.

Staff; Y, Su, Sp.

631 Personnel Administration in Education (4)

Prereq: 601 or perm. Organization and implementation of personnel functions. Covers organizational structure, staff procurement, staff selection, staff development, and conditions of service for people in the organization. Competencies in course conceptually oriented to provide understanding of personnel process.

Staff; Y.

640 The Principalship (4)

Prereq: EDRE 501; EDAD 601. Leadership theories and practices. Autonomous school; school/community organization; social-political forces; instructional leadership; teacher appraisal; elementary, middle, and secondary school administration.

Staff; Y, F, Su.

641 The Principalship-Skill Competencies (4)

Prereq: EDAD 640. Designed for persons aspiring to become administrators. Individualized approach to developing job skills in elementary, middle, and secondary schools in actual job setting; however, simulation may be used by student when approved by instructor.

Staff; W; Y.

661 Public Relations in Education (4)

Prereq: grad rank. Principles, program organization, agents, and media in effective public relations; models of communication; attitude change; development of problem situations and simulations

of practical problem-solving techniques; examples from public school administration; higher education administration, and sports administration.

Staff; Y.

671 Community Education (4)

Prereq: grad rank. Introduction to philosophy of community education with emphasis on role of school administrator in conceptualizing philosophy and then taking leadership in developing and implementing community education programs.

Staff; W.

690 Research in Educational Administration (2-6)

Prereq: perm of advisor. Individual research studies.

Staff; Y.

691 Seminar in Education (4)

Prereq: 35 hrs or perm. Special problems in educational administration.

Staff; F, W, Sp, Su.

695 Thesis (2-10)

Prereq: perm.

Staff; D.

702 State and National Administration of Education (4)

Prereq: 601. State program of education, state responsibility, educational organization, certification and tenure, national problems in education.

Staff; D.

703 Administration of Education in Other Countries (4)

Prereq: 601. Programs, organizational structure, and control of education in other countries. U.S. assistance programs for educational administration in developing nations.

Staff; D.

731 Conflict Management in Educational Administration (4)

Prereq: perm. Theories, attitudes, techniques, and strategies for managing conflict, solving problems, negotiating, and decision-making in educational organizations and sports organizations by educational and sports administrators.

Staff; Sp; Y.

734 Competency Development in Personnel Administration (5)

Practicum designed to develop competency to perform effectively in area of personnel administration. Includes all aspects of personnel administration as a team concept. Specific competencies developed include writing policy, staff selection, staff evaluation, establishing record systems, career counseling, salary administration, and meeting organizational and staff needs. Competencies developed in terms of actual situation.

Evans; D.

740 Special Problems of the Principalship (2-6)

Prereq: perm; master's degree; practicing principal. Critical appraisal of major problems and issues in elementary, middle, and secondary school administration. Individual and group study procedures.

Staff; Y.

742 Planning Educational Facilities (5)

Prereq: 601 or perm. Helps student to gain an appreciation for importance of facilities to educational enterprises. Acquaints student with principles, processes, and problems involved in identification of need for planning and acquisition of new facilities and for improvements to existing facilities.

Staff; W, Sp, Y.

751 Business Administration in Education (4)

Prereq: perm. Helps student develop increased awareness of and appreciation for role and function of business administration in total educational enterprise. Promotes understanding of major task areas and competencies required to become knowledgeable about current theories and recommended practices in administration of business affairs in education.

Staff; F, Y.

752 Problems in Administration of Education (1-6)

Prereq: grad rank and perm. Intensive course or workshop for practicing educational administrators. Content of each offering specially selected to meet needs of particular group being served. Amount of credit will depend upon length of course.

- A. Administration in Bilingual Settings
- B. Business Administration
- C. Collective Bargaining in Education

D. Community Education

E. Conflict Management in Educational Administration

F. Educational Facilities Planning

G. Educational Finance

H. Educational Law

I. Personnel Administration in Education

J. Politics of Education

K. Planning and Evaluation in Education

L. The Principalship

M. School Community Relations

N. The Superintendency

O. Pupil Transportation

Staff; D.

780 Politics and Local School Administration (4)

Prereq: perm. Examines ideas related to political power and educational decision-making, community power structure, school board member nomination and election, politics and innovations, and administrator's base of influence in community.

Evans; Sp; Y.

784 Educational Planning and Evaluation (5)

Prereq: perm. Intended to help advanced graduate students gain better understanding of theories related to and systems and techniques employed in comprehensive planning and evaluation in educational enterprises of all types and levels, and help students gain some competence in application of those theories, systems, and techniques.

Staff; Sp; Y.

791 Leadership Project-Problem Identification (4)

Prereq: perm. Individualized field-oriented course designed to assist practicing educator in conducting systematic, in-depth studies to identify critical problem areas in selected phase of school system operation.

Staff; F, W, Sp, Su; Y.

792 Leadership Project-Implementation (4)

Prereq: perm. Individualized field-oriented course to assist practicing educator in developing skills in identifying techniques and strategies for implementing change related to critical problem areas identified in 791.

Staff; F, W, Sp, Su; Y.

793 Leadership Project-Analysis and Evaluation (4)

Prereq: perm. Individualized field-oriented course to assist practicing educators in identifying and using techniques for analyzing their practices in implementing change. Complete leadership project (791, 792, and 793) culminates in a written analysis and evaluation under direction of student's advisor.

Staff; F, W, Sp, Su.

811 Legal Aspects of Educational Administration (4)

Prereq: 611 and admission as post-master's student in education administration. Intensive study of selected aspects of both case and statutory law, constitutional basis for education, schools in their legal setting, school legislation and relevant court decisions. Extensive reading in an approved law library required.

Staff; F.

824 Seminar in Educational Finance (5)

Prereq: 621, perm. Helps students gain greater depth of understanding of theories, practices, problems, and issues in an increased competence in performance of tasks of financing educational enterprises.

Staff; D.

831 Seminar in Collective Bargaining in Education (4)

Prereq: perm. Gives students understanding of collective bargaining movement in education through simulation, readings, guest lectures, media presentations, and discussions. Each student assigned a bargaining team which has responsibility for negotiating a contract. Attention given to analyzing contracts between selected employee groups and boards of education, impasse resolution, and contract administration.

Evans; W, Y.

844 Seminar in Educational Facilities (5)

Prereq: 742, perm. Helps students gain greater depth of understanding of and competence in planning of educational facilities and administration of building programs.

Staff; D.

854 Seminar in Business Administration in Education (5)

Prereq: 751, perm. Helps students gain understanding of and competence in tasks of administration of business affairs in education.

Staff; D.

864 Seminar in Public Relations (5)

Prereq: 661, perm. Special topics, new concepts, and specific techniques for public relations in public, private, higher education, and sports administration; in-depth investigation of problems of specific interest.

Staff; D.

881 Organization in Educational Systems (4)

Prereq: perm. Study of organizational and systems theories and analysis of organizational systems. Study of implications of such theories and systems for educational administration.

Evans; W; Y.

890 Research in Educational Administration (2-6)

Prereq: perm of advisor. Individual research studies.

Staff; F, W, Sp, Su; Y.

895 Dissertation (2-15)

Prereq: perm.

Staff; F, W, Sp, Su; Y.

Educational Research and Evaluation

In addition to the courses provided in this program area, the research staff provides services to both faculty and graduate students in the areas of research design, statistics, educational measurement, and computer utilization. Laboratory facilities, including programmable calculators, card punch, two computer terminals, and access to a library of statistical computer programs are available.

501 Introduction to Research Methods (4)

Methods of research in education. Selection, planning, and evaluation of research problems.

Staff; F, W, Sp, Su; Y.

510 Educational Measurements (4)

Construction of tests, item analysis, and statistics for test scores. Reliability, validity, and standard scores.

Staff; F, W, Sp, Su; Y.

690 Readings in Educational Research and Evaluation (1-4)

Prereq: perm. Guided readings course, tailored to meet needs and interests of individual students, in selected topics in educational research, measurement, statistics, and evaluation.

Staff; D.

692 Special Projects in Educational Research and Evaluation I (1-8)

Prereq: 6 hrs in area and perm (may be repeated for total of 8 hrs). Individual research in problem areas in educational research, statistics, measurements, and evaluation. May be a theoretical or critical evaluation of recent research in some area in regard to objectives, content, and methodology. Projects may be individual or small groups.

Staff; D.

693 Seminar in Educational Research and Evaluation (1-5)

Prereq: perm (may be repeated for total of 10 hrs). Special problems in elementary education, guidance, secondary education, and school administration.

Staff; D.

695 Thesis (2-10)

Prereq: perm.

Staff; D.

711 Techniques of Test Development (5)

Prereq: perm. Construction of evaluation instruments for research and classroom use, item analysis techniques, tryout, revision, and validation of instruments.

W.

712 Research in Educational Measurements (5)

Prereq: 711 and 720, or perm. Measurement and scaling theory, factor analysis, and research in selected measurement topics.

Staff; Sp; Y.

720 Educational Statistics I (5)

Tabulation and graphical representation of frequency tables, measures of central tendency, percentiles and percentile curves, measures of variability, standard scores, normal curve, introduction to sampling theory (large and small samples), testing statistical hypotheses, confidence intervals, t-distribution and correlation.

Barcikowski or Sligo; F, Su; Y.

721 Regression Analysis in Education (5)

Prereq: 720. Chi-square, linear regression and nonlinear relations, partial correlation, multiple correlation and regression, various methods of correlation, sampling distributions, confidence intervals, analysis of variance and covariance. Use of computer statistical packages and other statistical aids.

Barcikowski or Sligo; W, Su; Y.

722 Multivariate Methods in Education (5)

Prereq: 721. One-way, two-way, and higher dimensional designs; analysis of covariance with a variety of experimental designs. Multivariate analysis of variance and covariance, discriminant functions, canonical correlation and multiple discriminant function.

Barcikowski or Sligo; Sp; Y.

723 Questionnaires and Nonparametric Statistics in Education (5)

Prereq: 720 or perm. Emphasis on questionnaire design and analyses using nonparametric statistics. Sign test, Kolmogorov-Smirnov tests, test for runs, signed rank test, median test, various tests for comparisons of k samples, confidence intervals for nonparametric statistics, and tests of independence.

Barcikowski or Sligo; W; D.

724 Research in Educational Statistics (4)

Prereq: 722 or perm. Interpretation of research studies from a statistical viewpoint. Emphasis on examination of research designs that involve statistics. Use of computer for statistical analysis.

Barcikowski or Sligo; D.

731 Computer Science Applications in Education I (5)

Prereq: 720 or perm. Application of data processing and computer science techniques to problems in education.

Barcikowski; F, Su; Y.

732 Computer Science Applications in Education II (5)

Prereq: 721 and 731 or perm. Advanced application of data processing and computer science techniques to problems in education.

Barcikowski; W, Su.

733 Research Design in Education (5)

Prereq: 720 and 721 concurrent. Critical evaluation and development of research studies. Emphasis on development of problems which admit to scientific investigation, statement of hypotheses, definition of terms, problems of sampling, statistical methods, and interpretation and generalization of findings.

Barcikowski or Sligo; Sp; Y.

790 Advanced Readings in Educational Research and Evaluation (2-8)

Prereq: perm (may be repeated for a total of 15 hrs). Guided readings course, tailored to meet needs and interests of individual students, in selected advanced topics in educational research, measurement, statistics, and evaluation. May be a theoretical or critical evaluation of recent research in some area in regard to objectives, content and methodology. These projects may be individual or small groups.

Staff; D.

792 Special Projects in Educational Research and Evaluation II (2-10)

Prereq: perm (may be repeated for a total of 15 hrs). Individual research in problem areas in research and evaluation. May be a theoretical or critical evaluation of recent research in some area in regard to objectives, content, and methodology. Projects may be individual or small groups.

Staff; D.

793 Advanced Seminar in Educational Research and Evaluation (1-6)

Prereq: perm (may be repeated for a total of 15 hrs). Advanced seminar in selected topics in educational research and evaluation, including current trends, issues, and techniques.

Staff; D.

895 Dissertation (2-15)

Prereq: perm.

Staff; D.

Guidance and Counseling

Programs are offered leading to a graduate degree in guidance and counseling with specializations in community counseling, elementary school counseling, secondary school counseling, college counseling, counselor education, human relations specialist,

rehabilitation counseling, and research and evaluation. Professional preparation in these programs for the master's, sixth-year specialist, and doctoral degrees is designed for persons planning to pursue careers in special areas such as counselor education, elementary school counseling, middle school and junior high school counseling, high school counseling, and community agency counseling.

The doctoral program in counseling is psychological in content, experience, and nature. Ph.D. degree specializations are available in counseling, counselor education, and research and evaluation. The array of courses included in the curriculum may be used to meet the requirements for professional certification or licensure. The courses of study leading to degrees in the above areas combine personal growth, theoretical foundations, research, methodology, and practical experience relevant to the specialization of choice. They are designed for the specialty sought and on the basis of the background brought to the program by the student.

An undergraduate interested in such work should develop considerable breadth in the behavioral and social sciences. Undergraduate work in psychology, education, sociology, and communication is especially useful. For those interested in counseling at the elementary and secondary school levels, the development of a teaching area is still essential in many states for certification purposes.

520 Elementary School Guidance (4)

Prereq: perm. Rationale, scope, and nature of elementary school guidance; multiple approaches to provision of guidance services in elementary school with emphasis upon role of elementary school counselors in child study, counseling, consultation, classroom group guidance, and coordination.

Staff: F, Su.

521 Counseling, Teaching and the Behavior Change Process (5)

Prereq: 520, 530, or 540. Theories of behavior change process in an educational setting. Application and evaluation of techniques to facilitate and modify behavior which involves student, teacher, parent, and counselor in learning and growing process, with effective classroom communication emphasized.

Staff: D

522 Career and Vocational Development: Research and Theory (4)

Prereq: 520 or 530 or 540. Theories, practices, methods, and processes of career development for varied settings: school, community, business; review programs which facilitate career planning; life development components; exploration of career education and counseling opportunities, review and or implementation of career related research.

Staff: W, Y

525 Foundations of Rehabilitation Counseling (4)

Covers history and development of counseling of handicapped and disabled. Other topics covered include philosophy, counseling process, place of rehabilitation counseling in community, legislative aspects, and overview of agency activities.

Myers

530 Foundation of Guidance (4)

Prereq: perm. Rationale, scope, and nature of guidance and counseling services in educational and community settings; multiple approaches to provision of such services with emphasis on role of counselor in needs assessment, program planning, counseling, consultation, and coordination of services for diverse populations. Study of problems, issues, trends, and ethical responsibilities in field of guidance and counseling.

Staff: F, Su, Y

531 Appraisal I (4)

Prereq: perm. 520 or 530 or 540. Concepts of reliability and validity as applicable to appraising human characteristics set stage for considering critical role that clinical judgment plays in professional helping. Emphasis on basic appraisal techniques, including diagnostic interviewing, observational systems, rating scales, interactional analysis, and educational and psychological testing. Testing portion provides introduction to intelligence, achievement, aptitude, perceptual, vocational, and personality (objective and projective) measures.

Staff: W, Su, Y

532 Appraisal II (4)

Prereq: 531. Special attention devoted to intelligence theory and tests (e.g., Stanford-Binet and Wechsler instruments), case data

interpretation, and report writing and communication of appraisal results to other professionals.

Staff: W, A

533 Guidance of Early Adolescence (4)

Prereq: perm. Intellectual, psychological, social, and physical development of humans; development of several ways of explaining behavior of differing life stages and objective study and analysis of one stage of human development, e.g., early adolescence.

Staff: W, Y

534 Dynamics of the Adolescent (4)

Prereq: 520, 530, 540. Theories of adolescence; research literature on adolescent; case studies of selected adolescents; general coverage of psychological, social, intellectual, moral, and physical development of adolescents.

Staff: W, Su, Y

535 Guidance of the Exceptional (4)

Prereq: 520, 530, 540, or perm. Characteristics of individuals with physical, mental, social, emotional, or cultural exceptionalities. Includes study of mental retardation, learning disabilities, emotional disturbance as well as gifted and talented youth. Guidance and counseling services for meeting psychological, sociological, educational, and vocational needs. Study of an exceptional child.

Staff: Sp, Y

536 Guidance and Behavioral Aspects of Special Populations (4)

Prereq: perm. Intervention and treatment for special populations such as substance abuser; counseling and intervention for disfranchised including emotionally and physically disabled, handicapped, and incarcerated; and study of educational and personal characteristics of culturally different and implications for counseling.

Staff: D

537 Information Services (4)

Prereq: 520 or 530 or 540. Collection, evaluation, classification, and use of basic information involved in careers and socio-personal development. Emphasis upon career aspects of counseling and guidance and topical areas such as drug and alcohol education and abuse, sex education, marriage and family education, death and dying, sex, age, and race bias.

Staff: Sp, Su, Y

540 Dynamics of the Young Adult (4)

Prereq: perm, grad rank. Psychological, intellectual, moral, social, and physical development of young adult with major emphasis on theories of development and person-environment interaction.

Staff: W, Y

550 Guidance and Counseling in Groups (5)

Prereq: grad rank. History, theory, techniques, research of group counseling and group guidance in educational and community settings. Basic principles and forces in group dynamics. Various approaches and types of groups. Lectures, demonstrations, group lab experience.

Staff: F, Su, Y

551 Group Dynamics, Theory and Research (3)

Prereq: grad rank. History, theory, techniques, and research concerning group dynamics. Exploration of leadership styles and interventions related to group counseling encounter models, group process as it relates to community mental health and educational settings, lecturers, demonstrations, and lab.

Staff: D

555 Counseling Theory and Techniques I (5)

Prereq: 520 or 530 or 540. Experimental phase of course gives students practice in using communication counseling and relationship skills in preparation for counseling practicum and or field experience. Didactic phase of course includes study of analytic (Freud, Jung, and Adler) behavior modification, client-centered, and rational-emotive theories of counseling.

Staff: F, Su, Y

570 Organizational Theory and Techniques in Counseling and Personnel Services (4)

Prereq: 520 or 530 or 540. Emphasis on organization and administrative theories, as derived from behavioral sciences research. Techniques considered for variety of contexts, including schools, colleges, and universities; mental health facilities; and social service agencies.

Staff: D

580 Guidance and Counseling in International Dimensions (3)

Prereq: 520, 530, or 540. Guidance and counseling in other countries, problems of Americans and internationals abroad, role of international student advisor, and problems of bilingual American minority groups.

Doston; D.

600 Counseling Practicum: Elementary School (5)

Prereq: perm (May be taken 3 times for 15 hrs). Supervised counseling and guidance experiences with students in elementary schools or clientele in community agencies.

Staff; W, Sp.

601 Counseling Practicum: Secondary (5)

Prereq: perm preceding qtr (May be taken 3 times for 15 hrs). Supervised counseling and guidance experiences with students in secondary schools or clientele in community agencies.

Staff; W, Sp; Y.

602 Counseling Practicum: College (5)

Prereq: perm (May be taken 3 times for 15 hrs). Supervised counseling experiences with students in higher education settings.

Staff; W, Sp, Su; Y.

610 Field Experience in Guidance, Counseling, and Student Personnel Services (1-12)

Prereq: perm. Supervised field work in educational or community setting selected with regard to professional needs and interests of individual student. Student should have a clear idea of type of field experience desired and required setting for the experience before enrollment. Course requirements will include on-site supervision by staff, regularly scheduled on-campus conferences, and progress and terminal reports.

Staff; F, W, Sp; Y.

620 Readings and Research: School Counseling (1-3)

Prereq: perm of instructor (May be taken for total of 12 hrs). Study and interpretation of professional literature on counseling and other guidance services provided in elementary, secondary, and vocational school settings as well as 2-yr colleges. Independent and directed projects.

Staff; F, W, Sp, Su.

621 Readings and Research in Community Counseling (1-5)

Prereq: perm (May be taken for total of 12 hrs). Study and interpretation of scientific research on community mental health or selected government agencies. Independent and directed projects.

Staff; F, W, Sp; Y.

623A Special Topics Seminar: Alcohol and Substance Abuse Counseling (1-3)

Prereq: perm (can be taken for total of 18 hrs). Focuses on addictive process, stages and symptoms of alcoholism, effects of alcohol on body and intervention and treatment strategies for addiction.

Grubb; F, Sp.

623B Special Topics Seminar: Biofeedback, Self-control and Management of Stress (1-3)

Prereq: perm (can be taken for total of 18 hrs). Provides overview of holistic approach to well-being, nature and sources of stress and distress, effects of distress upon mind-body systems, and stress indicators that are important for developing physical and mental relaxation, cognitive intervention, and assertive behavior presented. Specific applications in occupational and life settings suggested.

Witmer; F.

623C Special Topics Seminar: Marriage and Family Counseling (1-3)

Prereq: perm (can be taken for total of 18 hrs). Analysis of factors contributing to marital and family dysfunction. Development and implementation of selected counseling models and strategies commonly used in working with couples and families.

Haseley; Sp, Su.

623D Special Topics Seminar: Assertiveness Training (1-3)

Prereq: perm (can be taken for total of 18 hrs). Focuses on theory and strategies of assertiveness training. Attention given to goal setting, role playing, alternative behavior, evaluating consequences; and implementation of assertive behavior. Emphasis focused on differentiating nonassertive, assertive, and aggressive behavior.

Navin; Sp, Su.

623E Special Topics Seminar: Counseling and Human Sexuality (1-3)

Prereq: perm (can be taken for total of 18 hrs). Study of human sexualness and stereotypical attitudes, attainment of basic knowledge, awareness of sexual abuse and violence, and understanding sexual dysfunction and sexual adequacy.

Hartman; F.

623F Special Topics Seminar: Adlerian Theory, Methods, and Research (1-3)

Prereq: perm (can be taken for total of 18 hrs). Theory and application of individual psychology in child discipline, marriage and family counseling, personal counseling, and psychotherapy.

Sweeney; D.

623G Special Topics Seminar: Human Relations Skills for a Multicultural Society

Prereq: perm. Provides for understanding of human relations skills for effective interpersonal communication. Focus on skill development, cultural and value differences among ethnic, racial, religious, and other groups. These skills have generic application for helping professional in educational, community, family, work, and leisure time settings.

Doston; D.

623H Special Topics Seminar (1-3)

Prereq: perm (can be taken for total of 18 hrs). Other seminar topics include areas of study in human potential, rehabilitation counseling, normal and dysfunctional physical and emotional development, etc.

Staff.

652 Laboratory: Group Counseling (5)

Prereq: perm. Group experience as basis for studying process, problems, and leadership techniques in group behavior change, growth, and development. Group experience will include membership and leadership roles.

Haseley; W; Y.

655 Counseling Theory and Techniques II (5)

Prereq: 555. Experimental phase of course gives students practice in using directives as well as interpretation, intervention, and structuring skills in counseling. Didactic phase includes study of gestalt, transactional analysis, reality, existential, and eclectic theories of counseling.

Grubb; W, Su; Y.

691 Seminar in Education (4)

Prereq: 35 grad hrs; perm. Student chooses area important to himself or herself, engages in library research, interviews, questionnaires, experimentation, etc. and writes research paper, in which his or her position is stated. Paper may be defended before a panel, which examines student on content as well as ideas. Instructor acts in advisory capacity.

Staff; F, W, Sp, Su; Y.

695 Thesis (2-10)

Staff; F, W, Sp, Su; D.

700 Advanced Counseling Practicum: Elementary School (5)

Prereq: advanced standing, perm. Supervised counseling and consulting experiences for advanced grad students working within elementary or secondary school, college, or community agency.

Staff; F; D.

701 Advanced Counseling Practicum: Secondary School (5)

Prereq: advanced standing, perm. Supervised counseling and consulting experiences for advanced grad students working within elementary or secondary school, college, or community agency.

Staff; W; D.

702 Advanced Counseling Practicum: College (5)

Prereq: advanced standing, perm. Supervised counseling and consulting experiences for advanced grad students working within elementary or secondary school, college, or community agency.

Staff; F, Sp; D.

720 Advanced Seminar in Guidance, Counseling, and Student Personnel (2-15)

Prereq: advanced standing, perm. Doctoral and specialist-level seminar providing students with preparation for in-depth study of counseling and personnel services in schools, agencies, and private practices.

Sweeney; F.

722 Career and Vocational Development and Counseling (4)

Prereq: advanced standing, perm. Methods and practices in career planning and decision making; career patterns and theories; guidance and counseling services which facilitate career and vocational development and research.

Staff; W; D.

732 Advanced Appraisal (5)

Prereq: 531 and knowledge of normal and abnormal (or exceptional) personality behavior; 532 recommended. Advanced appraisal techniques reviewed, with particular attention given to personality measures. Both objective and projective techniques considered, and each student expected to develop applied expertise with a method of each type. Actual case appraisals analyzed and critiqued. Integration of data from a variety of appraisal procedures and professional communication of results emphasized.

Grubb; Sp; A.

735 Counseling the Exceptional (4)

Prereq: advanced standing, perm. Characteristics of exceptional individuals; development and implementation of guidance and counseling services for exceptional individuals in educational and community settings.

Staff; D.

736 Counseling and Behavioral Aspects of Special Populations (4)

Prereq: advanced standing, perm. Intervention and treatment of special populations such as substance abuser; counseling and intervention for disfranchised including emotionally and physically disabled, handicapped, and incarcerated; and study of cultural and sociological influences on culturally different and implications for counseling.

Staff; D.

750 Practicum in Group (5)

Prereq: perm (May be taken 3 times for 15 hrs). Supervised experiences in group counseling in a variety of community mental health, university, and or school settings. Individualized readings and study of group counseling theory and techniques.

Haseley; F, W, Sp, Y

755 Counseling Theory: Advanced (5)

Prereq: advanced standing, perm. Counseling theories in depth such as psychoanalytical, client centered, behavioral, gestalt, and rational-emotive. Comparison and contrast on philosophical bases, basic concepts, goals, methods, expected outcomes, and evaluation.

Grubb; F; A

760 Counselor Education (4)

Prereq: perm. Counselor education history and development including standards, selection, and retention policies and practices, program design for pre- and in-service training, and current issues and research.

Staff; D

761 Practicum in Counselor Education (5-15)

Prereq: perm. Experience in program development and professional counselor preparation activities. Includes supervising of, consulting with, and education of pre- and in-service counselors. Other activities may include student and staff evaluation; school, college, or agency organization of personnel programs; and use of staff meetings for counselee study, staff consultation, and program management.

Grubb; F, W, Su, Y

762 Legal and Ethical Aspects of Counseling, Community, Personnel Services (4)

Prereq: perm. Law and ethics considered for educational and mental health contexts. Federal, state, and local statutes relevant to professional functioning, and rights and liabilities of persons receiving guidance, counseling, and psychological services considered. Court decisions, critical cases, and legislation analyzed and interpreted. Code of ethics for counselors, psychologists, student personnel workers, and human service workers reviewed. Guidelines for ethical behavior in delivery of services.

Staff; F

763 Advanced Practicum in Specially Oriented Community and Student Personnel Services (5)

Prereq: perm. Advanced practicum in specially oriented counseling and student personnel services. Doctoral-level practicum and seminar providing in-depth practical experience in selected human services such as student personnel programs in varied

colleges and universities, community agencies, and other non-educational settings.

Staff; D.

791 Advanced Seminar I (4)

Prereq: perm. Preparation of research proposal.

Staff; W; D.

792 Advanced Seminar II (4)

Prereq: perm. Preparation of research proposal.

Staff; W; D.

793 Advanced Seminar III (4)

Prereq: perm. Preparation of research proposal.

Staff; Sp; D.

800 Internship (10-15)

Prereq: perm and 2nd yr in doctoral program. Internship is 4th yr of grad study which may be taken at pre- or post-doctoral level. Intern will work full-time in appropriate professional setting consistent with student's program emphasis.

Staff; F, W, Sp.

821A Special Topics Seminar: Alcohol and Substance Abuse Counseling (1-3)

Prereq: perm (can be taken for total of 18 hrs). Focuses on addictive process, stages and symptoms of alcoholism, effects of alcohol on body, and intervention and treatment strategies for addiction.

Grubb; F, Sp.

821B Special Topics Seminar: Biofeedback, Self-Control, and Management of Stress (1-3)

Prereq: perm (can be taken for total of 18 hrs). Provides overview of holistic approach to well being, nature and sources of stress and distress, effects of distress upon mind-body systems, and stress indicators that are important for developing physical and mental relaxation, cognitive intervention, and assertive behavior presented. Specific applications in occupational and life settings suggested.

Witmer; F.

821C Special Topics Seminar: Marriage and Family Counseling (1-3)

Prereq: perm (can be taken for total of 18 hrs). Analysis of factors contributing to marital and family dysfunction. Development and implementation of selected counseling models and strategies commonly used in working with couples and families. Individualized, projected, and/or supervised counseling experience required.

Haseley; Sp, Su.

821D Special Topics Seminar: Assertiveness Training (1-3)

Prereq: perm (can be taken for total of 18 hrs). Focuses on theory and strategies of assertiveness training. Attention given to goal setting, roleplaying, alternative behavior, evaluating consequences and implementation of assertive behavior. Emphasis on differentiating nonassertive, assertive, and aggressive behavior.

Navin; Sp, Su.

821E Special Topics Seminar: Counseling and Human Sexuality (1-3)

Prereq: perm (can be taken for total of 18 hrs). Study of human sexualness and stereotypical attitudes, attainment of basic knowledge, awareness of sexual abuse and violence and understanding sexual dysfunction and sexual adequacy.

Hartman; F.

821F Special Topics Seminar: Adlerian Theory, Methods and Research (1-3)

Prereq: perm (can be taken for total of 18 hrs). Theory and application of individual psychology in child discipline, marriage and family counseling, personal counseling, and psychotherapy.

Sweeney; D

821G Special Topics Seminar: Human Relations Skills for a Multicultural Society (1-3)

Prereq: perm. Provides for understanding of human relations skills for effective interpersonal communication. Focus on skill development, cultural and value differences among ethnic, racial, religious, and other groups. These skills have generic application for helping professionals in educational, community, family, work, and leisure time settings.

Doston; D

821H Special Topics Seminar (1-3)

Prereq: perm (can be taken for total of 18 hrs). Other seminar topics include areas of study in human potential, rehabilitation

counseling, normal and dysfunctional physical and emotional development, etc.

Staff.

823 Advanced Readings and Research in Guidance, Counseling, and Student Personnel (1-10)

Prereq: advanced standing, perm. Independent studies and specialized projects for doctoral students in counseling, student personnel, guidance, and counselor education.

Staff; F, W, Sp, Su; Y.

825 Colloquium (1, max 3)

Prereq: perm. Doctoral level seminars to examine contemporary issues in guidance, counseling, student personnel, and counselor education.

Staff, D.

852 Advanced Laboratory in Applied Group Dynamics (5)

Prereq: perm. Group experience as method of studying and applying selected theoretical models of group counseling. Participants will experience membership and leadership roles. Individual readings and research on selected group counseling models.

Staff; W; D.

895 Dissertation (2-15)

Prereq: perm.

F, W, Sp, Su; Y.

Higher Education

Persons interested in positions within higher education are encouraged to design programs of study which prepare them for teaching, counseling, administration, and/or research suited to their experience, abilities, and interests. Students receive supervised experience in one or more of these areas in addition to didactic experiences within their other coursework. Degree programs in educational administration and guidance and counseling as well as those in other departments within the University provide substantial flexibility for such purposes.

590 Higher Education (4)

Background and growth of higher education in the U.S. Present status of various types of institutions.

Staff; F, Su; Y.

591 Community Colleges and Branch Campuses (4)

Prereq: 590 or perm. Special problems related to administration of community and junior colleges, branch campuses, vocational and technical colleges, and adult education programs.

Staff; Sp, Su; Y.

592 Teacher Education (4)

Prereq: perm. Teacher education in the U.S., its history, current status, and current issues. For persons planning to teach in colleges and universities which prepare teachers.

Staff; D.

690 Seminar: Current Issues in Higher Education (1-9)

Prereq: 590, perm. On-going, up-to-date treatment of significant current developments in higher education.

Staff; F.

780 Dynamics of College Teaching (4)

Prereq: perm. College teaching examined as to its meaning, intent, current practice (including observation in University classes), and potential improvement.

Staff; W; Y.

781 Directed Experiences in College Instruction (5-10)

Prereq: perm. Individualized program under guidance of instructor or department which would include field study and experience in college teaching.

Staff; F, W.

782 Curriculum Development in Higher Education (4)

Prereq: perm. Critical study of factors and issues involved in curriculum development. Types of curricula and underlying philosophies. Curriculum research and evaluation in higher education.

Staff; D.

783 Institutional Research and Self-Study in Higher Education (4)

Prereq: perm. Problems of institutional research office including institutional need and methods of data collection and reporting. Principles of long-range planning.

Dressel; W; Y.

784 Practicum in Higher Education Administration (3-6)

Prereq: perm. Practice in working under supervision in special administrative office in the University including offices of president, vice presidents, academic deans, business offices, etc.

Staff; F, W, Sp, Su; Y.

785 Administration in Higher Education I: Structure and Organization (4)

Prereq: perm. Depth study of internal organizational patterns and structure of a variety of institutions of higher learning. Policy perspectives in higher education.

Staff; W; Y.

786 Administration in Higher Education II: Control and Support (4)

Prereq: perm. Principles and problems of finance in higher education. Focus on internal fiscal management as well as on social policies underlying financial support of higher education.

Staff; Sp; Y.

787 Problems in Higher Education (4)

Prereq: perm. Intensive study of 1 or more problems in contemporary higher education; administration, structure, law, finance, curriculum, etc.

Staff; F, W, Sp.

821 Special Topic Seminar (1)

Prereq: perm. Seminar treatment of areas of current or topical interest in field of higher education. (May be repeated for credit.)

Staff; W; Y.

823 Readings and Research in Higher Education (1-3)

Prereq: perm. Independent study and specialized research projects for advanced students in field of higher education. (May be repeated for credit.)

Staff; F, W, Sp, Su; Y.

Student Personnel

Programs leading to the M.Ed. and the Ph.D. degrees are offered in student personnel. The programs have been developed with an emphasis in student personnel administration since the continuance of student affairs offices as important policy determiners in higher education will depend upon the most efficient management of resources to provide the most effective programs to enhance student development.

The primary function of the master's degree program is to prepare entry-level professional personnel for student personnel areas such as admissions, financial aids, residence life, student activities, student unions, career planning and placement, housing and food services, and other related services and programs.

The primary functions of the Ph.D. program are to prepare professionals for student personnel positions at the director, dean, assistant or associate vice-presidential, and vice-presidential level, or to prepare college faculty to teach student personnel.

541 Introduction to Student Personnel (4)

Introduction to field of student personnel including history and development of profession, roles and functions of student personnel professionals, overview of student personnel services and student development.

Dressel; F; Y.

542 Administration and Organization of Student Personnel Programs (4)

Prereq: perm. Relates theories and practices of leadership, decision making, organization and administration to student personnel programming in higher education.

Dressel; Sp; Y.

603 Practicum in Student Personnel (5)

Prereq: 541 and perm (May be taken 3 times for total of 15 hrs). Supervised experiences in student personnel offices of the University or of neighboring educational institutions.

Dressel; F, W, Sp; Y.

622 Readings and Research in Student Personnel (1-5)

Prereq: perm (May be taken for total of 12 hrs). Survey, analysis, interpretation, and synthesis of professional literature on college student personnel. Independent, directed research project in area of college student personnel.

Dressel; F, W, Sp; Y.

741 College Student-Environmental Interactions (4)

Prereq: perm. Explores several person-environmental theories,

emphasizes assessment of environment for purposes of changing environment to enhance student development.

Dressel; F; Y.

742 Advanced Theories of Administration, Organization, and Leadership in Student Personnel (4)

Prereq: perm. Study of selected theories of administration, organization, and leadership with specific application to student personnel operations in higher education.

Dressel; W; Y.

743 Advanced Seminar in Student Personnel: Current Issues (2)

Prereq: perm. Seminar format concerned with specific professional issue each qtr such as legal issues or professional development; research and guests used extensively. May be repeated for a total of 8 hrs.

Dressel; F; W; Sp; Y.

Curriculum and Instruction

The School of Curriculum and Instruction offers programs of graduate study designed to meet the academic and professional requirements of those persons involved in teaching, curriculum development, and supervision.

Master's degree programs are offered in curriculum and instruction, including emphases in elementary education, middle school education, secondary education, special education, supervision in reading, elementary, secondary and special education, educational media, and teaching of the talented and gifted.

The doctoral program in curriculum and instruction is designed to prepare curriculum and supervision workers to serve as change agents in school and or university settings. The Ph.D. program provides a core of experiences in educational foundations, curriculum, and instructional theories, and a specialization in one of the following areas: reading and language arts, social studies education, supervision, economic education, or mathematics education.

Individuals who wish to pursue graduate study in education must meet established graduate entrance requirements and be accepted by the department which offers the program desired. Dependent upon the grade-point average earned as an undergraduate, an applicant for master's degree study may be required to submit the results of the Graduate Record Examination (verbal and quantitative) or the Miller Analogies Test. Applicants for doctoral study must submit Graduate Record Examination scores (verbal, quantitative and advanced education tests) and the result of the Miller Analogies Test.

Students not seeking a degree may pursue graduate courses on a nondegree basis in a planned program of professional development.

Anyone considering graduate work in education should arrange to complete the application process a month in advance of the term in which he or she plans to begin study, since the Graduate Record Examination may be taken only on certain dates throughout the year. Applications for financial aid should be submitted by March 15 to receive consideration for the student entering the following academic year.

For more information about programs, contact the Director, School of Curriculum and Instruction, College of Education, McCracken Hall, Ohio University, Athens, Ohio 45701.

Special Note for Students in Education: Any student who has earned a master's degree in education at Ohio University and who plans to take any additional work in education must reapply for admission through the Office of Graduate Student Services.

500 History of Western Education (4)

Prereq: perm. Survey of education in western world from ancient Judaic schools to major contemporary developments. Emphasis on institutional developments and cultural events which accompanied them.

Stevens; D.

501 History of Education in the United States (4)

Prereq: perm. Survey of educational developments from colonial America to present. Readings include both primary and secondary sources. Emphasis on institutional developments and cultural events which accompany them.

Stevens; W; Su; Y.

502 Evolution of Educational Thought (4)

Prereq: perm. Study of selected educational theorists and cultural assumptions which influenced their ideas. Where available, readings are from primary sources.

Stevens; F; Y.

503 Philosophies of Education (4)

Prereq: perm. Survey of European and American educational theorists and movements from a philosophic perspective. Contemporary educational thought in U.S. emphasized.

Stevens; Wood; Sp; Su; Y.

504 Social Structure and Change in Education (4)

Prereq: perm. Studies in interaction of social structure and educational reform. Concepts of class, status, bureaucracy, technocracy, and cultural pluralism assessed in their relationships to sociology of knowledge and educational alternatives.

Wood; Su; Y.

505 Comparative Cultures and Education (4)

Emphasis on distinctive cultural, economic, and political forces which shape patterns, problems, and roles of education in selected nations, with emphasis on nations where a former or present western culture has an impact. Assessment of this impact on educational developments analyzed.

Warmke; W; Y.

506A Education and Developments in Africa (4)

Prereq: perm. Introductory interdisciplinary course focusing on tradition and change in African society, problems of political independence, economic development, cultural values in transition, tribalism and nationalism, and role of Africa in world peace and international cooperation. Traditions and change in African education, role of education in economic and technological development. Issues and problems in African education.

Staff; D.

506B Education and Development in Asia (4)

Prereq: perm. Tradition and change in Asian education, landmarks in Asian educational developments, role of education in economic and technological development. Issues and problems in Asian education.

Warmke; D.

506C Education and Development in Latin America (4)

Tradition and change in Latin American education, landmarks in American educational developments, role of education in economic and technological development. Issues and problems in Latin American education.

Staff; D.

507 Programs in International Education (3)

Prereq: perm. Assistance programs to education in developing nations; foundation programs, UNESCO programs, A.I.D. programs. Assistance programs of other nations. Objectives, structures, funding, organization, and plans for implementation.

Staff; D.

508 Perspectives in International Education (4)

Prereq: 505 or perm. Introductory interdisciplinary course dealing with concept of international educational understanding, psychological, economic, and political preconditions; perceptions, values, and attitudes. Human and cultural dimensions; role of education in attitude change and formation relative to international understanding and development; issues involved.

Warmke; Sp; Y.

510 Principles of Curriculum (4)

Major curricular movements, principles of curriculum development, forces affecting what is taught, curriculum evaluation, and recent trends.

Plougholt; Johnson; F; Su; Y.

515 Basic Classification and Cataloging (5)

Prereq: admission to grad study. Prepares prospective media specialists for classification and cataloging of both print and non-print materials with practice in preparation of card catalog such as would be encountered in elementary and secondary school library media center. Research paper required.

Roberts Strother; F.

516 The Use of Library Resources II (3)

Prereq: admission to grad study. Trains prospective media specialists in effective use of modern library reference sources, including indexes, bibliographies, dictionaries, yearbooks with emphasis on subject fields such as art and music, economics, history, geography, education, library, literature, psychology, philosophy, religion, science and technology. Research paper required.

Roberts Strother; W.

520 Foundations of Reading Instruction — Elementary (5)
Prereq: EDRE 501. Current programs, materials, and practices in reading instruction; developmental concept, emphasizing optimum realization of pupil potential, and utilization of reading in total school curriculum.

Rebottini, Pinney, van der Veur; F, Su; Y.

521 Foundation of Language Instruction (5)

Prereq: EDRE 501. Current programs, materials, and instructional practices in language-arts curriculum. Treatment of both impression and expression aspects of oral and written communication. Identification and individual investigation of problem areas.

Pinney, Rebottini; F; Y.

522 Diagnosis: Reading/Language (5-15)

Prereq: 520 or 526. Correlation of variability in reading proficiency with incidence of retardation and disability. Exploration of causes of failure and concept of multiple causation. Review of specialized materials and instructional efforts. Systematic observation of cases of reading disabilities and preparation of case report.

Rebottini, van der Veur; F, Su; Y.

523 Reading/Language: Laboratory (5-15)

Prereq: 522. Application of developmental approach to problem cases in reading instruction, participation in diagnostic examination, parent and teacher conferences, individual procedures in tutoring, staffing of cases, and preparation of reports. (Weekly group discussion period, lab sessions arranged.)

Rebottini, van der Veur; Sp, Su; Y.

524 Literature for Children and Adolescents (5)

Seminar in critical analysis of research and theory related to children's and adolescent literature. Opportunity to study individual problems.

Pinney; Sp; Y.

526 Secondary Reading Instruction (5)

Materials, methods, and techniques of secondary reading instruction for teaching adolescent learners of various abilities. Emphasis on diagnosis of reading difficulties and adaptation of materials and teaching methods for content area instruction.

Bates; W, S; Y.

528 Library Service to Children and Young Adults (4)

Study of various aspects of library/media work with children and young adults through films, texts, articles, and small and large group discussions. Class participants will study trends in library services, including effects of television, outreach programs for special child. Major emphasis placed on selection policies of library/media materials.

Strother/Roberts; F, Sp.

530 Problems and Practices in Modern Elementary Mathematics — Practicum (4)

Prereq: EDRE 501, perm. Modern elementary mathematics curriculum with emphasis on why changes are occurring. Nature of changes as reflected from experimental programs; effect of changes on methods of teaching. Implementation of these changes in the classroom.

Smith; F; Y.

540 New Programs and Practices in Elementary Science — Practicum (4)

Prereq: EDRE 501 and perm. New programs and trends in science teaching identified and evaluated. Philosophy, content and grade level placement of topics in federal, foundation, and privately sponsored experimental programs in elementary science identified. Practice in using materials proposed by those various groups and in applying metric education, simulations, games, etc.

Martin; Sp; Y.

541 New Topics in Science and Science Education for Elementary School Teachers (4)

Prereq: perm and teaching experience. Modern advances in science, and current topics, to determine suitable content, apparatus, and grade placement for presentation in elementary schools. Development and use of curriculum guides, modern units, outdoor education, science fairs, field trips, programmed materials, and similar methods of advancing science education required.

Martin, Skinner; D.

542 Seminar in Science Education (3)

Prereq: bachelor's degree and perm. Provides elementary and secondary school teachers with a variety of techniques which will enable them to integrate new concepts of science education into their teaching, such as environmental education, population edu-

cation, energy conservation, world hunger, food problems, outdoor biology, etc.

Skinner, Mitias, Martin; D.

550 Teaching Strategies for Cultural and International Understanding (4)

Prereq: EDRE 501, perm. Psychological and sociological foundations of cultural values and ways of life investigated. Strategies for developing cross-cultural understanding and cooperation studied and developed. Emphasis upon innovative approaches to learning for elementary and secondary school pupils. Practicum provided.

Staff; D.

551 Programs and Practices in Elementary Social Studies — Practicum (4)

Prereq: EDRE 501, perm. Trends in modern social studies curriculum.

Leep; Su; Y.

560 Advanced Studies of Children (4)

Prereq: 20 hrs of education and/or psychology. Intensive study of research in child development from conception to maturity and implications for educational practices.

Brunk; Su; Y.

561 Introduction to Individualization of Education (4)

Prereq: grad rank. Each participant will develop knowledge of major concepts for individualization of education, and demonstrate this knowledge through creation of an instructional package ready for implementation in a classroom setting. Study of major components necessary for teacher to implement individualized instruction in classroom.

Johnson; Sp; Y.

562 Learning and Educational Cognitive Styles (5)

Prereq: 596 and 597 or perm. Individualized mode of delivery used to provide teaching/learning activities which will lead to knowledge of learning style models in psychology and education; competence in educational cognitive style, and educational cognitive style mapping; classroom learning center concept; and classroom learning center module design.

Strother.

565 Introduction to Teaching the Talented and Gifted (4)

Provides introduction to rationale, scope, and nature of concerns relative to education of gifted youth. Attention given to overview of problems and issues; including (1) societal factors that influence programs, (2) characteristics and identification of gifted youths, and (3) current and recommended programs.

Leep.

566 Strategies for Teaching Talented and Gifted (4)

Prereq: grad rank. Provides regular classroom teachers with background to prepare materials and conduct activities suitable for challenging gifted students in their regular classrooms. Various programs appropriate for gifted students explored.

Skinner; W.

567 Creativity in Development and Learning (4)

Study of creativity in human development, analysis of factors influencing creative behavior and learning, and discussion of implications of current knowledge for instructional situations.

Brunk; Su.

570 Nature and Needs of Exceptional Children and Youth (5)

Prereq: grad rank. Introductory course in special education at graduate level. Major objective to provide comprehensive understanding of nature and needs of exceptional individuals of all ages with emphasis on current issues and trends in special education.

Staff; F; Y.

570A Curriculum and Instructional Materials for the Mentally Retarded (3)

Prereq: 6 hrs in special education. Philosophy, principles, content, organization, and methods needed to analyze, design, and develop comprehensive curriculum plans, instructional programs, and appropriate materials to teach retarded individuals of all ages and levels.

Hoessli; F; Y.

570B Language Arts for the Mentally Retarded (3)

Prereq: 6 hrs in special education. In-depth methods and materials of language arts instruction with mentally retarded. Includes 15 clock hrs of directed lab experience, tutoring mentally retarded child, adolescent, or adult.

Staff; F; Y.

570C Social Studies and Science for the Mentally Retarded (3)

Prereq: 6 hrs in special education. Detailed study of instruction in social studies and science, including development of teaching unit for mentally retarded and consideration of these content areas for the retarded in mainstream. Includes 15 clock hrs of directed experience, teaching science or social studies to group of retarded children or adolescents in school setting.

Staff: W; Y.

570D Mathematics for the Mentally Retarded (2)

Prereq: 6 hrs in special education. Mathematics instruction with educable and trainable retarded giving emphasis to vocational and social usage.

Staff: W, Su; Y.

570E Vocational Education for the Retarded (3)

Prereq: 6 hrs in special education. Provides overview of career and vocational options for handicapped persons of all ages. Defines role of special education and regular education personnel in providing career and vocational guidance, training, placement, and follow-up services to promote career and life adjustment of handicapped persons. Delineates potential employment opportunities for handicapped persons.

Hoessli; Sp; Y.

571 Problems in Education of Mentally Retarded Children and Youth (2-9)

Prereq: 6 hrs in special education and perm. Critical evaluation of selected current problems confronting teacher, consultant, specialist, or administrator concerned with education of mentally retarded children and youth.

Reeves; F, W, Sp, Su; Y.

572 Diagnosis and Evaluation of Handicapped Children (4)

Prereq: 6 hrs in special education. Formal and informal methods of assessment, screening, and classification; collection and appropriate application of clinical data; formulation of prescriptive educational plans for handicapped children and youth utilizing laboratory experience and multidisciplinary consultations.

Schaaf; F; Y.

573 Education of the Multi-Handicapped (4)

Prereq: 6 hrs in special education. Diagnosis, characteristics, learning potentials, IEP IHP, curriculum, materials, and instructional methods for severely and profoundly multiple handicapped individual with emphasis on interdisciplinary team process.

Jageman; Sp; Y.

574 Introduction to Learning Disabilities (4)

Prereq: 6 hrs in special education. Overview of field of learning disabilities, including specific characteristics and educational approaches.

Safran; F, Su; Y.

575 Education of the Trainable Retarded (4)

Prereq: 6 hrs in special education. Program services history and trends, curriculum, materials, and instructional methods for moderately mentally retarded in areas of motor, communication, self care, social, functional academics, daily living, and leisure education covered.

Staff: W; Y.

576 Administration and Organization of Special Education (4)

Prereq: 6 hrs in special education. Historical perspective, diagnostic procedures, legislative provisions, research implications, community and professional resources, current issues, and general organization and management of special education programs. Applied field experiences arranged on both group and individual bases.

Staff, Sp, A.

577 Education and Counseling of Parents of the Handicapped (4)

Prereq: 6 hrs in special education. Development of skills required to set up parent education programs with emphasis on the educational aspect, interpreting problems of handicapped child to parents.

Staff, F, Y.

578 Early Childhood Education for the Handicapped (4)

Prereq: 6 hrs in special education. Purpose, organization, and methods of early childhood education of the handicapped. Planning, guiding, supervising, and evaluating growth and behavior of young handicapped children.

Reeves, Sp, Y.

580 Homemaking and Family Living for the Retarded (3)

Prereq: 6 hrs in special education. Identification of resources; development and application of curriculum, methods, and materials for teaching home and family living skills to handicapped children and adults.

Jageman; W; A.

581 Medical Aspects of Handicapping Conditions (2)

Prereq: 6 hrs in special education. Development of medical terminology and understanding of effect of medical conditions on conditions of learning. Emphasis on bio-chemical, convulsive, and neurological disorders.

Staff; W; Y.

582 Diagnostic and Prescriptive Teaching with Learning Disabled (4)

Prereq: 574 and 6 hrs in special education. Methods of identifying and evaluating children's academic and behavioral problems, and effective remedial procedures.

Schaaf; Sp; Y.

583 Education of the Emotionally Handicapped (4)

Prereq: 6 hrs in special education. Introductory study focusing on characteristics of emotionally disturbed/behavior disordered children/youth. Specific topics covered include conceptual models of disturbance, classification, specific characteristics (i.e., aggression, withdrawal, hyperactivity, juvenile delinquency), and implications for educational and psychological intervention.

Safran; W.

584 Teaching the Emotionally Disturbed (4)

Prereq: 583 and 6 hrs in special education. Specific methods of teaching emotionally disturbed/behavior disordered children/youth. Different approaches covered, including psychoeducational techniques, affective education, cognitive behavior modification, behavioral interventions, and developmental therapy.

Safran; Sp; Y.

585 Behavioral Management of the Handicapped (3)

Prereq: 6 hrs in special education. Overview and application of psychological principles pertinent to behavioral management models including behavior modification, modeling, classroom meetings, classroom structures, self-control techniques, communication techniques, and comprehensive systems.

Jageman, Reeves; W, S; Y.

589 Problems in Learning Disabilities (2-9)

Prereq: 6 hrs in special education and perm. Critical evaluation of selected problems in area of learning disabilities.

Staff; F, W, Sp, Su; Y.

592 Workshop in Curriculum and Instruction (1-15)

Prereq: perm (max of 8 hrs may be counted toward requirements of a master of education degree). Designed to provide practicing teachers and other instructional personnel with inservice education directed toward their identified needs. Facilitates offering of short courses, workshops, and summer institutes. Following are areas of concentration currently available.

- A. Language Arts
- B. Social Studies
- C. Science
- D. Mathematics
- E. Reading
- F. Kindergarten
- G. Individualizing Instruction
- H. Team Teaching
- I. Interaction Analysis
- J. Developing Behavioral Objectives
- K. Curriculum Development
- L. Interdisciplinary Topics
- M. Special Topics
- N. Special Education Topics
- O. Supervision of Instruction

Staff, D.

596 Introduction to Educational Media (4)

Prereq: grad rank. Principles of instructional materials and media applied to teacher-student communication. Basic experiences in production of instructional materials and equipment operation. Research paper required. Lab.

Strother, F, W, Sp, Su, Y.

597 Production of Instructional Materials (4)

Prereq: grad rank and 596, or EDM 480. Use and preparation of locally produced, inexpensive instructional materials. Lab experi-

ence in use of pictures; lettering; coloring; preservation; and reproduction techniques for pictures, slides, transparencies, etc. Final project required.

Strother; W; Y.

605 Individual Studies in Comparative Education (2-6)

Prereq: perm. Studies in an area of national development.

Warmke; D.

606 Seminar in Comparative Education (3-5)

Prereq: perm. Introductory seminar providing opportunity to identify areas of interest and concern, to exchange ideas and views with others (including students from abroad), and to develop rationale for study of educational systems and developments in other societies. Affords foreign students technique for viewing American education and means for American students to look abroad.

Warmke; D.

610 Elementary School Curriculum (5)

Prereq: EDRE 501. Curriculum as a basic educational concern; issues involved in selecting and organizing content; systematic study of curriculum development in elementary school.

Ploghoft, Leep; Sp; Su; Y.

611 Supervision of Instruction (4)

Basic concepts and theories of supervision, case studies of supervisory situations, and basic research in education and ancillary fields such as psychology, sociology, business administration, philosophy, and communications.

Thompson, Ploghoft; F, Su; Y.

612 Junior High-Middle School Curriculum (4)

Prereq: 510. Concentrates specifically on early adolescent age. Special emphasis on unique purposes and concepts of jr high/middle school curriculum and its role in providing articulation between elementary school and sr high school.

Johnson; W; Y.

613 High School Curriculum (4)

Prereq: 510. Study of high school curriculum including emphasis on sources of curriculum and major curriculum movements, study of current issues and program alternatives, and development and evaluation of high school curriculum.

Thompson; F, Su; Y.

614 Analysis of Supervisory Systems (4)

Prereq: 611. Analysis of actual and/or simulated supervisory systems with attention to distinctive aspects of elementary, secondary, and special education supervision.

Thompson; W; Y.

616 Post High School Adult Education — Curriculum and Practices (4)

Prereq: perm. Historical development and trends; participants; agencies of adult education; and curriculum and instruction.

Staff; D.

617 Evaluation of Secondary Schools (4)

Criteria, procedures, and problems relating to evaluation of secondary school personnel and programs. Field experience in evaluation is encouraged.

Staff; D.

618 Supervision of Special Education (4)

Prereq: 611 and 6 hrs of special education or perm. Emphasizes leadership skills, principles, practices, and programs leading to improved education for handicapped children and professional growth for teachers in special education. These skills encompass all areas of exceptionality and include the competencies for evaluating full-time programs, part-time programs, and supportive services to children in the mainstream of education as these relate to each of the several handicapping conditions. Laboratory experiences arranged on an individual basis.

Staff; Sp; A.

635 Advanced Classification and Cataloging (4)

Prereq: 515 or perm. Problems of classifying by Dewey; corporate entry; Library of Congress classification and subject headings; serials. Introduction to other classification systems, divided and classified catalogs, administration of catalog departments; consideration of current issues. Lab work involved.

Roberts/Strother; W

636 Media and the Young Adult (4)

Prereq: Admission to grad study. Theoretical approach to young adult programming and services: analyzing general characteristics of young adults, their information needs, institutional services

and operational factors, materials and media, information-seeking behavior, media use, and impact of media.

Roberts, Staff; Sp.

637 Library Media Automation (3)

Covers computer applications to library functions: instruction; management of instruction; instructional software evaluation, and instructional software design technique.

Strother.

660 Advanced Principles of Teaching (4)

Critical appraisal of research in areas of learning and teaching. Study of instructional models as applied to classroom teaching and learning.

Staff; Sp, Su; Y.

666 Characteristics of the Gifted and Their Assessment (4)

Prereq: grad rank. In-depth study of characteristics of gifted as revealed through empirical/experimental research and literature. Focal point is an examination/analysis/identification of cognitive, social, emotional, and personal qualities most dominant among gifted, as well as concomitant problems. Attention given to processes and tools of assessment of characteristics as well as to multiple variables (economic, social, cultural, etc.) which relate to these characteristics.

Mitias.

670 Practicum in Education of Mentally Retarded (2-6)

Prereq: 6 hrs in special education and perm. Working directly with learning disabilities classes or with individual children to identify problems and develop and implement a prescriptive plan.

Staff; F, W, Sp; Y.

671 Practicum in Education of Emotionally Disturbed (2-6)

Prereq: 6 hrs in special education and perm. Individual experiences selected for preparation of personnel for classroom, consultant, or supervisory positions.

Staff; F, W, Sp; Y.

672 Practicum in Administration of Special Education (2-6)

Prereq: 6 hrs in special education and perm. Directed administrative experiences in educational programs for handicapped in public schools. Recommend that this follow or be taken concurrently with EDCI 576.

Staff.

673 Practicum in Learning Disabilities (2-6)

Prereq: perm and 6 hrs in special education. Working directly with learning disabilities classes or with individual children to identify problems and develop and implement prescriptive plan.

Staff; F, W, Sp; Y.

674 Practicum in Supervision of Special Education (2-6)

Prereq: perm and 6 hrs in special education. Directed supervisory experiences with special education supervisors in public schools. Recommend that this follow or be taken concurrently with EDCI 618.

Staff.

690 Research in Education (2-6)

Individual study, under direct supervision of faculty, of a basic research problem, culminating in a written report.

Staff; F, W, Sp, Su; Y.

691 Seminar in Education (3)

Prereq: 35 hrs or perm. Problems in education. Emphasis on research of special problems and development of a scholarly research paper.

Staff; F, W, Sp, Su; Y.

695 Thesis (2-10)

Prereq: perm.

Staff; F, W, Sp, Su; Y.

696 Organization and Administration of Educational Media Programs (5)

Prereq: 515, 516, 528, 596, 597, 698, perm and grad rank. Duties of university and public school media directors: budgeting, training of personnel, handling and classifying materials, management and evaluation programs. Research paper required.

Strother; Sp; Y.

697 Analysis of Media Theory, Research and Instructional Design Model Nomenclature (3)

Prereq: EDRE 501 or perm. Review, analysis, and criticism of research in educational media, with interpretation and application of research findings of primary concern. Suggestions for future research in educational media, sequencing of instruction in relation

to hierarchies of competence, and design of multi-media instruction explored.

Strother.

699 Practicum in Educational Media (3-9)

Prereq: grad rank and perm (perm must be obtained 1 qtr previous to enrolling in 699). Course participants evaluate a number of media centers for several university media areas. Participants required to prepare written reports on center evaluations.

Strother, Roberts, D.

700 Advanced Foundations of Education (4)

Prereq: perm. Seminar for selected interdisciplinary studies in social, cultural, and philosophic foundations of education.

Stevens, D.

706 Advanced Seminar in Comparative Education (5)

Prereq: perm. Emphasis on interdisciplinary treatment of problems and concerns. Contemporary situations investigated. Techniques for comparative study of educational systems and developments.

Staff; D.

709 Internship in Comparative Education — United States or Abroad (10-15)

Prereq: perm. 1-year assignment with stateside operation (such as aiding or assisting in comparative education program) or assignment abroad. Interns required to have had experience in teaching in the U.S.

Staff; D.

715 Theories of Curriculum Change (5)

Prereq: 660 or perm. Major curriculum models and their underlying theory. Critical reading and interpretation of research related to curriculum change and effectiveness. Applications of theory and research in new models.

Thompson; F; Y.

716 Theories of Instructional Change (5)

Prereq: 660, 715. Theories and models of instruction, their psychological and philosophical basis; constructing of models of instruction to effect desired changes and development.

Strother, Staff; W; Y.

717 Human Dynamics for Curriculum Change (5)

Prereq: 715. Theoretical models of personality, group process, and communication; series of encounter sensitivity sessions.

Ploghoft; Sp; Y.

719 Curriculum and Instruction Practicum (6)

Prereq: 715, 716, 717. Supervised experiences in analysis and application of theories and techniques of curriculum change and instructional change in school setting.

Staff, F, Sp, Su, Y.

720 Foundations of Elementary Reading Instructions (5)

Critical evaluation of literature and recent research on objectives, content, and methodology. History of instruction, current problems and issues, recent trends and emphasis in teaching practices. Impact of dominant theories of learning and philosophies of education. Research design and methodology in scientific investigations.

Rebottini, Pinney, van der Veur, F, Su, Y.

721 Foundations of Language Instruction (5)

Prereq: perm. Critical evaluation of literature and recent research on objectives, content, and methodology. History of instruction, current problems and issues, recent trends and emphases in teaching practices. Impact of dominant theories of learning and philosophies of education. Research design and methodology in scientific investigations.

Pinney; Rebottini, F, Y.

722 Diagnosis: Reading Language (5-15)

Prereq: 720 or 726. Correlation of variability in reading proficiency with incidence of retardation and disability. Exploration of causes of failure and concept of multiple causation. Review of specialized materials and instructional efforts. Systematic observation of cases of reading disabilities and preparation of case report.

Rebottini, van der Veur, F, Su, Y.

723 Laboratory-Reading Language (5-15)

Prereq: 722. Application of developmental approach to problem cases in reading instruction, participation in diagnostic examination, parent and teacher conferences, individual procedures in tutoring, staffing of cases, and preparation of reports. (Weekly group discussion period, lab sessions arranged.)

Rebottini, van der Veur, Sp, Su, Y.

724 Literature for Children and Adolescents (5)

Seminar in critical analysis of research and theory related to children's and adolescent literature. Opportunity to study individual problems.

Pinney; Sp; Y.

726 Secondary Reading Instruction (5)

Materials, methods, and techniques of secondary reading instruction for teaching adolescent learners of various abilities. Emphasis on diagnosis of reading difficulties and adaptation of materials and teaching methods for content area instruction.

Bates; W; S; Y.

730 Curriculum in Elementary Education — Mathematics (4)

Prereq: perm. Critical evaluation of literature and recent research on objectives, content, and methodology. History of instruction, current problems and issues, recent trends and emphases in teaching practices. Impact of dominant theories of learning and philosophies of education.

Smith; D.

740 Curriculum in Elementary Science Education (4)

Prereq: teaching experience. History of science instruction, curriculum problems, issues, recent trends and emphases in teaching practices. Impact of dominant theories of learning and philosophies of education on current curriculum changes in elementary school science. Critical review of existing conventional programs used as a background for examining experimental programs. Emphasis on historical development of science education from dominance of nature study and esthetics to modern experimental programs.

Staff; D.

750 Inquiry and Value Clarification in Social Studies (4)

Prereq: 550 or 551. Critical discussion of application of inquiry and value clarification models in teaching of social studies.

Leep; D.

760 Readings and Research in Human Development (3-5)

Interpretation of scientific literature on human development as related to classroom experience in preschool through adolescence. Independent projects and solving selected educational problems.

Brunk; D.

790 Advanced Seminar in Education-Research (4)

Prereq: perm. Review of current literature and research in education. Preparation of research proposal.

Staff; D.

800 The Child and Adolescent in Today's World (5)

Prereq: Master's degree or perm. Study and critique of major theories of child and adolescent growth and development; analysis of present and anticipated future social and cultural changes and their impact on learning and student development.

801 The School as a Dynamic Social Institution (5)

Prereq: Master's degree, 800 or equiv. School as changing social system, changing philosophies, functions, and cultural styles of school. Politics, control, and conflict resolution in school.

Ploghoft, Stevens; W; Y.

802 The Curriculum Worker as a Change Agent (5)

Prereq: Master's degree, 800, 801, or equiv. Analytical study of theories, concepts and strategies of change, and roles of change agents as related to educational institutions and programs. Case studies and field experiences related to change as examined with emphasis on planning, analysis, and evaluation.

Thompson, Sp, Y.

810 Seminar in the Supervision of Instruction (5)

Prereq: 614. Critical analysis and discussion of theory, research, major issues, and trends in field of educational supervision and application of findings to supervisory practices and programs.

Staff, D.

820 Research and Curriculum in Elementary Education Reading (4)

Prereq: perm. Critical evaluation of literature and recent research on objectives, content, and methodology. History of instruction, current problems and issues, recent trends and emphasis in teaching practices. Impact of dominant theories of learning and philosophies of education. Research design and methodology in scientific investigations.

Staff, f)

821 Field Experience: Reading (5-15)

Prereq: 720 or 726. Supervised field experiences in reading.
Staff; D.

822 Field Experience: Language (5-15)

Prereq: 721. Supervised field experience in language.
Staff; D.

823 Independent Study: Reading (5-15)

Prereq: 720 or 726. Independent study with topic restricted to some aspect/level of reading instruction.
Staff; D.

824 Independent Study: Language (5-15)

Prereq: 721. Independent study with topic restricted to some aspect/level of language instruction.
Staff; D.

827 Practicum in Secondary Education — English (5)

Prereq: perm. In-depth study of school system and its English curriculum with critique by faculty and report by student, utilizing available research.
Bates; D.

828 Practicum in Secondary Education — Modern Foreign Languages (5)

Prereq: perm. In-depth study of school system and its modern foreign language curriculum with critique by faculty and report by student, utilizing available research.
Staff; D.

830 Research in Elementary Education — Mathematics (4)

Prereq: perm. Research design and methodology in scientific investigations.
Staff; D.

831 Practicum in Secondary Education — Mathematics (5)

Prereq: perm. In-depth study of contemporary mathematics curriculum and instruction in secondary schools with analyses and critiques of relevant research and scholarly writings.
Pikaart; D.

840 Research in Elementary Education — Science (4)

Prereq: perm. Critical evaluation of recent research on objectives, content, and methodology in science education. Research design and methodology of these investigations studied in detail. Review of microfilm research studies and abstracts made to identify areas and problems requiring further research.
Staff; D.

841 Practicum in Secondary Education — Science (5)

Prereq: perm. In-depth study of theory and foundations of science curricula and instructional practices within given school system; analysis of pertinent research as it applies to science education in schools.
Staff; D.

850 Seminar in Social Studies Education: Curriculum in Social Studies (3)

Prereq: 8 hrs grad work in social studies education, post-master's analysis of social, curricular, and instructional theories of various contemporary schools of thought in social studies.
Leep; F; D.

851 Seminar in Social Studies Education: Program Analysis (3)

Prereq: 850. In-depth analysis of school system and its social studies curriculum.
Staff; W; D.

852 Seminar in Social Studies Education: Research (3)

Prereq: 851. Identification of reasonable researchable problems in social studies and development of appropriate research design.
Staff; Sp; D.

890 Research in Education (2-12)

Prereq: admission to advanced standing.
Staff; F, W, Sp, Su; Y.

895 Dissertation (2-15)

Prereq: perm.
Staff; F, W, Sp, Su; Y.

Economic Education

The M.A. in economic education at Ohio University is administered by the faculty of the School of Curriculum and Instruction in the College of Education. It is designed specifically for in-service teachers who have baccalaureate degrees and who meet the normal graduate admission standards and the standards of the School of Curriculum and Instruction. A program of 48 quarter hours in economic education, economics, and educational theory and research is required. Degree candidates are expected to take a minimum of 28 quarter hours in economic education, 12 quarter hours in economics, and eight quarter hours in education. The total program must be planned with and approved by the graduate advisor.

The Ph.D. is also offered through several programs in the School of Curriculum and Instruction, College of Education. These are described elsewhere in this bulletin, under the heading *Education*.

546 Economics in the Curriculum (3-5)

For teachers and other qualified graduate students, designed to provide study of (1) fundamental economic concepts, (2) methods of inquiry employed by economists, and (3) relationship of economics content to classroom instruction and instructional materials.
Staff; F; D.

547 Economic Analysis and Its Application to the Curriculum (2-5)

For elementary and secondary teachers, designed to emphasize methods of inquiry employed by economists and their application to theories of instruction.
Staff; F; D.

548 Economic Policy and Its Application to the Curriculum (2-5)

For elementary and secondary teachers, designed to provide application of an economic analysis to economic policy and courses of study.
Staff; Su; D.

649 Economic Education Programs (3-5)

Prereq: perm. Economic education in the schools; administrative and organizational structures, current curriculum development projects, essential economic understandings that should be taught and their place in the curriculum, ways to improve economic education and economic education organizations.
Staff; Sp; D.

651 Master's Seminar (2-5)

Prereq: perm. Writing of colloquium papers in areas of economic education.
Staff; Su; A.

691 Economic Education Seminar (2-5)

Prereq: perm. Selected topics of current interest.
Staff; W; Sp; Y.

692 Economic Education Research (3-5)

Prereq: perm. Methodology, analysis of data, and preparation of research findings. Precedes writing of colloquium paper.
Warmke; Su; Y.

693 Readings in Economic Education (1-15)

Prereq: perm. Readings on topics selected by student in consultation with a faculty member.
Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)

Prereq: perm (as recommended by faculty advisor and thesis committee).
Staff; F, W, Sp, Su; Y.

697 Independent Research in Economic Education (1-15)

Prereq: perm. Research in selected fields of economic education under direction of faculty member.
Staff; F, W, Sp, Su; Y.

698 Internship (as recommended) (1-15)

Prereq: perm.
Staff; F, W, Sp, Su; D.

791 Economic Education Seminar (3-5)

Prereq: perm. Selected topics of current interest.
Staff; F, W, Sp, Su; D.

792 Economic Education Research (3-5)

Prereq: perm. Methodology, analysis of data, and preparation of research findings.

Staff: F, W, Sp, Su, D.

Professional Laboratory Experiences

Professional laboratory experiences for graduate students are designed for the individual student by the director of field experience in conference with the student's graduate advisor. The experience is planned as a meaningful extension of the student's prior experience as a teacher, counselor, or administrator. In general, undergraduate student teaching is a prerequisite for all graduate-level laboratory experiences.

560 Internship in Education (3-9)

Prereq: 9 qtr hrs graduate work in education and perm of director of field experience and student's graduate advisor. Teaching certificate and experience for interns in administration and supervision. Internship in school administration, supervision of instruction or classroom teaching for minimum of 1 qtr, full-time. Following brief period of orientation to school and community, student assumes increasing responsibility under direct supervision of staff member of school system. Student expected to function as classroom teacher with regular supervision, as team member in team-teaching situation, or as assistant to administrator or supervisor. Weekly seminar conducted by college staff and public school associates.

Staff: F, W, Sp, Su, Y.

561 Internship in Education (3-9)

Prereq: 9 qtr hrs graduate work in education and perm of director of field experience and student's graduate advisor. Continuation of 560. See 560 for description.

Staff: F, W, Sp, Y.

570 Supervision of Student Teaching (3-9)

Prereq: teaching certificate and experience. Principles and techniques in supervision of student teaching and other professional laboratory experiences. Designed primarily to prepare public school teachers and college instructors for more effective supervision.

Staff: D.

690 Professional Laboratory Studies (3-9)

Special studies based upon direct experience in supervision of student teachers in campus or public school laboratories.

Staff: D.

760 Internship in Education (3-9)

Prereq: 9 qtr hrs graduate work in education, perm of director of field experience and student's graduate advisor. Teaching certificate and experience for interns in administration and supervision. Internship in school administration, supervision of instruction, or classroom teaching for minimum of 1 qtr, full-time. Following brief period of orientation to school and community, student assumes increasing responsibility under direct supervision of staff member of school system. Student expected to function as classroom teacher with regular supervision, as team member in team-teaching situation, or as assistant to administrator or supervisor. Weekly seminar conducted by college staff and public school associates.

Staff: F, W, Sp, Su, Y.

761 Internship in Education (3-9)

Prereq: 9 qtr hrs graduate work in education, perm of director of field experience and student's graduate advisor. Continuation of 760. See 760 for description.

Staff: F, W, Sp, Y.

790 Professional Laboratory Studies (3-9)

Special studies based upon direct experience in supervision of student teachers in campus or public school laboratories.

Staff: D.

ENGINEERING AND TECHNOLOGY**Chemical****Civil****Electrical and Computer****Industrial and Systems****Mechanical**

Programs of graduate study may be formulated with majors in chemical, civil, electrical and computer, industrial and systems, or mechanical engineering.

The standard four-year course in engineering or its equivalent, as offered in institutions approved by the Accreditation Board for Engineering and Technology, Inc. (formerly Engineers Council for Professional Development), is a general prerequisite for graduate study. Graduates in science and other fields of engineering, whose programs have included sufficient courses in mathematics, physics, chemistry, the humanities, and the social sciences, may be accepted as graduate students. Such students must take undergraduate basic engineering courses as the staff may require.

Chemical Engineering

Programs leading to M.S. and Ph.D. degrees are offered in the areas of materials engineering (polymers and corrosion), transport phenomena, thermodynamics, process dynamics, design, coal conversion, and the usual related topics.

The basic requirement for admission to graduate study in the department is a B.S. degree in chemical engineering. Special programs of study leading to the M.S. in chemical engineering are available for students who have received bachelor's degrees in other scientific or engineering fields. These special programs usually require completion of some portions of undergraduate chemical engineering courses. Inquiries are invited.

Students working toward the M.S. are expected to take a minimum of seven graduate-level chemical engineering courses or their functional equivalent. In addition, a minimum of two graduate-level courses must be elected with the advisor's approval required. The following courses must be included in the chemical engineering area: 500, 501, and 542.

A nonthesis option is available for students having proven research competence. This program requires a minimum of one additional (8) graduate-level chemical engineering course (or the functional equivalent), and one additional (3) elected graduate-level course. No more than two elected courses outside chemical engineering may be taken in the same department. A special topic investigation extending over two or more quarters is required of all participants.

Students are encouraged to take coursework outside the department in such relevant areas as mathematics, physics, chemistry, or other engineering disciplines. All resident graduate students are expected to participate in departmental graduate seminars when offered. A student working toward a Ph.D. will take courses and appropriate work as required to fulfill a program of study determined by the student and his or her advisory committee.

500 Applied Chemical Engineering Calculations (5)

Prereq: perm. Partial differential equations, matrix differential equations, difference equations, and design of experiments corresponding to chemical engineering situations. Methods available for their solutions including classical, numerical, and computer techniques.

Chen, F, Y

501 Advanced Chemical Engineering — Thermodynamics (5)

Chemical engineering processes, pure materials, and mixtures. Criteria of equilibrium for homogeneous and heterogeneous systems. Correlation and estimation of properties; thermodynamic consistency tests. 4 lec.

Mayer, F, Y

503 Heterogeneous Catalytic Processes (5)

(Qtr determined by demand) Principles of heterogeneous catalysis, and applications of catalysis in the process industries.

Kendall, W, Y

506 Thermodynamics of Solids I (5)

Interpretations of thermodynamic quantities in atomistic terms with relationship to both ideal and defect structures in crystalline materials. Methods of obtaining thermodynamic data from phase diagrams and determination of phase diagram consistency. 4 lec.
Baloun; D.

530 Advanced Metallic Corrosion (5)

Review of basic principles and current theories of stress corrosion and embrittlement, corrosion fatigue, and transgranular and intergranular corrosion. Some laboratory work utilizing recent techniques and apparatus. 4 lec.

Baloun; D.

531 Transformations in Metallic Solids I (5)

Kinetics of reactions in metallic solids; diffusion, eutectoid, bulk, and other solid reactions. 4 lec.

Baloun; D.

534 Theoretical Structural Metallurgy I (5)

Advanced physical metallurgy. More complex atomic arrangements in metals and alloys. Elastic and plastic properties of single and polycrystalline materials including creep, creep recovery, and the Bauschinger effect. 4 lec.

Baloun; D.

540 Process Dynamics (5)

Prereq: perm. Digital computer control in chemical engineering. State space concepts and its application in process control.

Chen; Sp; Y.

542 Transport Phenomena (5)

Theoretical basis of development of heat, mass, and momentum transfer. Boundary layer theory and comparison with other theoretical and semitheoretical approaches. 4 lec.

Collier; W; Y.

543 Transport Phenomena (5)

Prereq: 542. Continuation of 542. See 542 for description.

Staff; D.

545 Advanced Chemical Engineering Operations (5)

Selected topics from absorption and extraction. Multi-component, azeotropic, and extractive distillation. Non-ideal separation processes. 4 lec.

Staff; D.

546 Petroleum Processing (5)

Prereq: perm. Study of modern petroleum refining and processing techniques, including: distillation, chemical conversion processes (catalytic processes), solvent extraction, etc. Brief examination of composition and physical properties of petroleum, and of test methods used in evaluating refinery stocks. Secondary emphasis on sources and preparation of petrochemical feedstocks.

Kendall.

560 Atmospheric Pollution (4-5)

Prereq: perm. Sources and effects of air pollution and of methods for measurement and control of particulate and gaseous pollutants. History and current status of air pollution legislation.

Baasel; Sp; Y.

571 The Physical Chemistry of Macromolecules (4)

Prereq: CHEM 455 or perm. Structure and behavior of large molecules, both synthetic and natural. 3 lec.

Day, Collier; Sp; Y.

572 Polymer Properties (5)

Chemical structure-property relationships, rubber elasticity, solution properties, melt properties, crystallization, morphology, orientation, physical properties.

Collier; F; Y.

573 Polymer Properties II (5)

Prereq: grad rank in engineering or chemistry. Orientation and fiber properties, composite materials, time-temperature superpositioning of mechanical properties, thermal stability and stress cracking. Relationship between ultimate properties and possible uses of polymeric materials. 4 lec.

Collier; D.

574 Advanced Polymer Engineering (5)

Prereq: grad rank in engineering. Non-Newtonian and viscoelastic, melt and solution rheology; constitutive equations and fabrication of polymeric materials. 4 lec.

Collier; Sp; Y.

575 Advanced Polymer Engineering II (5)

Prereq: 574. Continuation of 574. See 574 for description. 4 lec.

Collier; D.

577 Polymer Synthesis and Properties (5)

Synthesis mechanisms and how these mechanisms, resultant polymers, and their properties are interrelated. 4 lec.

Collier; D.

681 Research in Chemical Engineering (1-15)

Staff; F, W, Sp, Su; Y.

690 Special Topics in Chemical Engineering (1-6)

Advanced study in a particular field of chemical engineering.

Staff; F, W, Sp, Su; Y.

691 Readings and Seminar (1-5)

Assigned readings and special reports in selected areas of chemical engineering theory and practice.

Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)

Staff; F, W, Sp, Su; Y.

The following special graduate courses with the designation N are intended for the following purposes:

- For graduate students in disciplines other than chemical engineering desiring to obtain graduate credit for advanced undergraduate chemical engineering courses.
- For graduate students in chemical engineering with previous degree work in disciplines other than chemical engineering, required to make-up needed deficiencies in chemical engineering background. These courses *do not satisfy* any of the courses or credit hours required for the master's degree in chemical engineering.

The credit hours are variable to reflect the need for variable amounts of background material required or desired by each student. Prerequisites are permission in all cases.

509N Chemical Engineering Thermodynamics and Kinetics (1-4)

Prereq: perm. Application of thermodynamics to chemical engineering problems, including problems in chemical equilibrium for homogeneous and heterogeneous systems, mixtures, and pure materials. 5 lec.

Baloun; F; Y.

510N Chemical Engineering Thermodynamics and Kinetics (1-4)

Prereq: perm. Continuation of 509N. See 509N for description. 3 lec, 2 lab.

Baloun, Kendall; W; Y.

511N Chemical Engineering Thermodynamics and Kinetics (1-4)

Prereq: perm. Continuation of 509N-510N. See 509N for description. 3 lec, 2 lab.

Kendall; Sp; Y.

513N Unit Operations I (1-4)

Prereq: perm. Fundamental principles of fluid flow, heat, and mass transfer.

Collier; F; Y.

514N Unit Operations II (1-4)

Prereq: perm. Continuation of 514N. See 514N for description. 4 lec, 2 lab.

Mayer; W; Y.

515N Unit Operations II (1-3)

Prereq: perm. Stagewise processes including distillation and extractions. 3 lec, 2 lab.

Mayer; Sp; Y.

517N Chemical Engineering Lab I — Synthesis and Analysis I (1-4)

Prereq: perm. Lab emphasizing use of digital computers for analyzing chemical engineering problems and numerical methods for solving them. 1 lec, 2 lab.

Collier; W; Y.

519N Applied Chemical Engineering Calculations (1-4)

Prereq: perm. Design of chemical engineering experiments, least squares, factorial design. Solutions of ordinary differential equations of chemical engineering, series solutions, Laplace transforms, computer synthesis and analysis.

Chen; Sp; Y.

521N Chemical Engineering Lab III (1-3)

Prereq: perm. Lab practice to illustrate principles of selected unit operations, thermodynamics and applied kinetics; and to aid student in gaining confidence in handling of chemical engineering equipment. Development of ability to devise and conduct chemi-

al engineering experiments with minimum supervision and to report results satisfactorily stressed.

Mayer; W; Y.

522N Chemical Engineering Lab IV (1-3)

Prereq: perm. Continuation of 521N. See 521N for description.

Mayer; Sp; Y.

524N Chemical Engineering Lab V (1-3)

Prereq: perm. Continuation of 522N. 2 lec, 2 lab.

Mayer; Sp; Y.

526N Process Control (1-3)

Prereq: perm. Simulation and control of chemical processes. Feedback control using root loci and Bode diagrams is covered. 4 lec.

Chen; F; Y.

528N Chemical Engineering Design (1-4)

Prereq: perm. Preliminary process design of chemical plant and its economic evaluation plus additional detail design problems. Involves a trip, which usually lasts 3 days, to various chemical plants. Student responsible for own expenses on this trip. 3 lec, 2 rec.

Baasel; F; Y.

529N Chemical Engineering Design (1-4)

Prereq: perm. Continuation of 528N. See 528N for description.

Baasel; F; Y.

700 Seminar in Engineering Mathematics (1-6)

Advanced study in applied mathematics in chemical engineering. Restricted to small groups, with extensive student participation required.

Staff; D.

701 Seminar in Irreversible Thermodynamics (1-6)

Advanced study in thermodynamics with emphasis on irreversible thermodynamics. Restricted to small groups, with extensive student participation required.

Staff; D.

703 Engineering Analysis (3)

Application of modern mathematical tools such as tensor calculus, matrix analysis, functional approximations, iterative methods, asymptotic approximations, and special function theory to problems in major fields of engineering. Mathematical modeling, alternative methods of approach to solution and interpretation of results. 3 lec.

Staff; D.

704 Engineering Analysis (3)

Prereq: 703. Continuation of 703. See 703 for description.

Staff; D.

705 Engineering Analysis (3)

Prereq: 704. Continuation of 703-704. See 703 for description.

Staff; D.

706 Seminar in Statistical Thermodynamics (3)

Advanced study in thermodynamics with emphasis on statistical thermodynamics. Restricted to small groups, with extensive student participation required.

Staff; D.

709 Seminar in Reactor Kinetics (3)

Advanced study in chemical engineering reactor kinetics. Restricted to small groups, with extensive student participation.

Staff; D.

740 Seminar in Process Dynamics (3)

Advanced study in chemical engineering process dynamics. Restricted to small groups, with extensive student participation required.

Baasel, Chen, D.

741 Seminar in Control Theory (1-3)

Advanced study in analog, hybrid, and digital computer control theory. Restricted to small groups, with extensive student participation required.

Baasel, Chen, D.

742 Seminar in Transport Phenomena (1-6)

Advanced study in transport phenomena. Restricted to small groups, with extensive student participation required.

Collier, Dinos, D.

760 Seminar in Composite Materials (3)

Prereq: 573. Advanced study in materials engineering with emphasis on structure and processability of composite materials. Re-

stricted to small groups, with extensive student participation required.

Collier; D.

771 Seminar in Polymer Engineering (3)

Prereq: 572 and 574. Advanced study in polymeric materials with emphasis on polymer engineering. Restricted to small groups, with extensive student participation required.

Collier; D.

889 Independent Study in Fundamental Chemical Engineering (1-6)

Intensive study in specified area.

Staff; D.

890 Independent Study in Materials Engineering (1-6)

Independent study in specified area.

Collier; D.

891 Colloquium in Fundamental Chemical Engineering (1-3)

Series of advanced lectures, primarily by internationally known speakers outside the University, on topics in field of chemical engineering, with discussion moderated by speaker.

Staff; D.

892 Colloquium in Materials Engineering (1-3)

Series of advanced lectures, primarily by internationally known speakers outside the University, on topics in field of materials engineering, with discussion moderated by speaker.

Collier; D.

893 Practicum for Teaching Assistants (1-3)

Prereq: teaching assistant. Introduction to lab procedures for teaching assistants. Required of all incoming teaching assistants.

Staff; D.

894 Research (1-15)

Doctoral level.

Staff; D.

895 Dissertation (1-15)

Staff; D.

Civil Engineering

In civil engineering a master of science degree may be earned in fluid mechanics, solid mechanics, geotechnical engineering, environmental engineering, structures, or transportation.

Applications are invited from engineering or science graduates. Collateral work to remedy deficiencies of those without civil engineering degrees may be carried out in parallel with the M.S. program. Collateral requirements will depend upon the applicant's preparation in the major field of study. With the approval of his or her advisor, the student may elect either the thesis or the nonthesis plan (at least 30 credits of graduate coursework plus a thesis, or 45 credits of graduate coursework including three to five credits of a special investigation, respectively).

Certain related courses offered by other departments can count toward the major requirements. For example, various courses in mechanical engineering or mathematics can be included as part of a major in mechanics, and selected courses in chemistry or bacteriology can be considered as part of the major study in environmental engineering. Some study outside the department, but in related fields, is encouraged for all students.

A student, in consultation with an advisor, arranges his or her own program to suit personal needs and to satisfy the requirements of the Department of Civil Engineering.

The Department of Civil Engineering recommends that the student begin in the fall quarter. There are no deadlines for applications for financial aid.

515 Photogrammetry (3)

Prereq: 210 or perm. Equipment and methods used in aerial photography and land measurement. 2 lec, 2 lab.

Kaneshige, W; Y.

523 Continuum Mechanics (4)

Prereq: perm. Matrix methods in mechanics and structures; law of dynamics; mechanical properties of solids and fluids; basic theories of continuum mechanics. 4 lec.

Hazen, Sp. D. 1977

524 Strength of Materials II (3)

Prereq: perm. Theories of failure, unsymmetrical bending, shear center, and other topics not covered thoroughly in undergraduate course. For nonmajors in civil engineering. 3 lec.

Staff; F; Y.

525 Advanced Strength of Materials (4)

Prereq: perm. Advanced treatment of theories of failure, stresses and strains at a point, cross shear, unsymmetrical bending, curved beams, torsion, thick-walled cylinders, energy methods. 4 lec.

Staff; F; Y.

526 Theory of Stability (3)

Prereq: perm. Buckling of columns, beam columns, plates, and rings. 3 lec.

Hazen; W; Y.

527 Experimental Stress Analysis (3)

Prereq: 524 or 525. Elasticity theory; theory and use of mechanical, electrical, and other strain-measuring devices including photoelastic equipment. 2 lec, 3 lab.

Hazen; Sp; Y.

528 Theory of Elasticity and Applications (3)

Prereq: perm. Equations of equilibrium and compatibility; stresses and strains in beams, curved members, thick cylinders, torsion, and structural members.

Hazen; F; D.

529 Mathematical Theory of Elasticity (3)

Prereq: 528. Fundamental equations and problems of elasticity theory; methods of stress functions and displacement potentials; finite element applications.

Hazen; W; Y.

535 Advanced Structural Theory I (4)

Prereq: perm. Analysis of indeterminate structures by both classical and modern methods. Analysis of multistory bents, arches, closed rings, and frames with variable cross-sections. Plastic theory and design. 4 lec.

Staff; F; 1979.

536 Advanced Structural Theory II (4)

Prereq: 535. Continuation of 535. Relaxation methods, matrix methods, shell structures. 4 lec.

Staff; W; 1979.

537 Advanced Structural Design (4)

Prereq: 536. Modern design concepts and principles as applied to various construction materials. 4 lec.

Staff; Sp; 1980.

542 Applied Hydraulics (3)

Prereq: perm. For nonmajors in civil engineering. Flow and pressure distribution in multi-loop networks, dynamics of flow in pumps and turbines. Uniform and nonuniform flow in open channels, culvert hydraulics, hydraulic transients. 2 lec, 2 lab.

Olson; Sp; Y.

543 Open Channel Hydraulics (3)

Prereq: perm. Principles of uniform and varied flow. Channel design for uniform flow, gradually varied flow profiles, channel transitions, hydraulic jumps, flow in prismatic and non-prismatic channels. 3 lec.

Olson; Sp; Y.

546 Potential Flow Theory (3)

Prereq: perm. Inviscid flow theory. General equations of fluid mechanics, study of potential flows. 3 lec.

Olson; F; Y.

547 Viscous Flow Theory (3)

Prereq: perm. Mechanics of fluid resistance, laminar and turbulent flow, applications to external boundary layer flow and to flow in ducts. 3 lec.

Olson; W; Y.

555 Advanced Water Treatment (4)

Prereq: 450, 452, and perm. Advanced study of theory. Design of treatment units. Practice in control methods. 3 lec, 3 lab.

Kaneshige; W; Y.

556 Advanced Waste Water Treatment (4)

Prereq: 451, 452, and perm. Advanced study of theory. Design of treatment units. Practice in control methods. 3 lec, 3 lab.

Kaneshige; Sp; Y.

558 Water Quality Engineering (3)

Prereq: perm. Natural and man-made characteristics of water quality, changes in quality resulting from use, criteria for control

of stream pollution, methods of improving water quality, legal and economic aspects.

Staff; Sp; D.

562 Traffic Engineering (3)

Prereq: 361, nonmajors by perm. Vehicle and driver characteristics, uses of traffic control devices, intersection design and capacity, parking characteristics. For nonmajors in civil engineering. 2 lec, 2 lab.

Russ; W; D; 1979.

563 Traffic Parameters (4)

Prereq: perm. Vehicle-highway relationships, including vehicle performance and highway geometry; highway capacities and their influence on design.

Russ; F; Y; 1980.

564 Transportation Data Methods (4)

Prereq: perm. Introduction to traffic survey methods, data collection, evaluation. Topics include origin-destination, speed, parking, accident, and future development studies.

Russ; W; Y; 1980.

565 Traffic Regulations and Controls (4)

Prereq: 563 or perm. Typical traffic ordinances and regulations and their utilization to control traffic through use of signs, markings, control devices, traffic signals including their use as single units or as a progressive series.

Russ; Sp; Y.

567 Traffic Studies I (1-4)

Prereq: 564. Practical problems relating to traffic surveys and data analysis.

Russ; Sp; D; 1978.

568 Traffic Studies II (1-4)

Prereq: 565 or perm. Practical problems relating to vehicular characteristics and traffic movements.

Russ; W; D.

570 Soil Engineering (4)

Prereq: perm. For nonmajors in civil engineering. Soil composition, physical and chemical properties and classifications. Water movement and seepage problems; stress distribution, settlement, and shear strength. Applications to earth structures, retaining walls, foundations, and slope stability. 3 lec, 2 lab.

Sargand; W; Y.

572 Soil Mechanics I (3)

Prereq: perm. Water movement through soil, construction and interpretation of flow nets. Elastic equilibrium, stress distribution, compressibility and settlement of cohesive and noncohesive soil; consolidation theory. 2 lec, 2 lab.

Sargand; F; Y.

573 Soil Mechanics II (3)

Prereq: 572. Shearing strength. Plastic equilibrium, lateral soil pressures, stability of footings (bearing capacity), retaining walls, and slopes. 2 lec, 2 lab.

Sargand; W; D; 1979.

574 Advanced Soil Mechanics Laboratory (1)

Prereq: 572, 573. Advanced techniques for measurement of soil engineering properties. 3 lab.

Sargand; Sp; D.

575 Advanced Foundation Engineering (3)

Prereq: 471. Design of shallow and deep foundations for complex or unusual soil conditions; design of earth retaining structures including retaining walls, cofferdams, and sheet pile bulkheads; site improvement; performance evaluation and instrumentation.

Sargand; Sp; D.

576 Soil Stabilization (4)

Prereq: perm. Engineering, geological and pedological soil classification systems. Mineralogy of clay minerals and claywater systems; requirements for and factors affecting soil stability. Methods and mechanisms of soil stabilization; design and testing stabilized soils. 3 lec, 3 lab.

Staff; F; D.

582 Paving Materials and Mixtures (3)

Prereq: perm. Types, constituents, chemical behavior, tests, specifications, and uses of bituminous materials. Portland cements and aggregates in pavements. Design and manufacture of paving mixtures, and construction of pavements. 2 lec, 3 lab.

Staff; W; D.

583 Principles of Pavement Design (3)

Prereq: perm. Fundamentals of wheel loads and stresses in pavements. Properties in pavement components and design tests. Design methods and evaluation. 3 lec.

Staff: Sp; D.

590 Special Investigations (1-5)

Prereq: perm. Special investigations or problems not covered by formal courses and not requiring thesis.

Staff: F, W, Sp, Su, Y.

694 Research (1-6)

Prereq: perm. For thesis.

695 Thesis (1-15)**511 Passive Filter Synthesis (3)**

Principles of filter synthesis, positive-real functions, synthesis of 1-port networks, synthesis of 2-port networks, approximation, frequency transformations, and filter design.

F; Y.

512 Active Filter Synthesis (3)

Prereq: 511. Principles of active filter synthesis, active filter elements, realization of active 2-port networks, multiple feedback filters, explicit formulas and practical filter design, and active filter design using optimization.

W; Y.

513 Digital Filter Design (3)

Prereq: 511 and 512. Principles of digital filter design, z-transform, discrete Fourier transform, representations of digital filters, digital filter design techniques, and computer methods in digital filter design.

Sp; A.

525 Automatic Control I (3)

Prereq: perm. Formulation of linear models for lumped-parameter physical systems, fundamental principles of closed-loop control, signal flow graphs. Routh-Hurwitz criteria; Root locus method, Bode plots; introduction to control system using Root locus and Bode plots. Special problem required.

Raju; F; Y.

526 Automatic Control II (3)

Prereq: 525 or perm. Nyquist stability criterion, Nichols charts, cascade and feedback compensation, frequency domain performance specifications, minor loop design. Special problem required.

Raju; W; Y.

527 Automatic Control III (3)

Prereq: 526 or perm. Sampled-data systems, z-transforms, sampled data system design using digital compensators; state-space concepts, designing of control systems using state variable feedback, microprocessor control.

Raju; Sp; Y.

540 Microwave Theory and Devices (3)

Prereq: perm. Transmission lines, Smith chart, impedance matching, waveguides, survey of devices (microwave generators, semiconductor devices, etc.).

Radcliff.

541 Antennas I (3)

Prereq: perm. Fundamental concepts and definitions, radiation integrals and potentials functions, linear wire antennas, loops, arrays, matching techniques, antenna measurements, laboratory demonstrations.

Radcliff.

542 Introduction to Radar and Aircraft Navigation Systems (3)

Prereq: perm. Discussion of radar as applied to aviation requirements of surveillance, approach and landing, weather avoidance; presentation of principles of VOR, DME, RNAV, ILS, ADF, Loran, Omega.

Chamberlin, Sp

543 Electromagnetics I (3)

Prereq: perm. Mathematical review of vector operations in Cartesian and curvilinear coordinates. Solution of wave equation in Cartesian coordinates and application to wave reflection from interfaces between general media. Decomposition of wave solutions into TE, TM, and TEM waves, with application to waveguides and transmission lines; solution of wave equation in cylindrical coordinates, with application to circular waveguide, radiation from line sources, and scattering from cylindrical objects.

H Chen, F

547 Introduction to Avionics (3)

Prereq: 542 or perm. Intermediate study of radiation patterns and modulation techniques required for UHF/VHF aircraft communications and enroute and approach guidance. Extension of VHF instrument landing systems (ILS) to microwave landing system (MLS) presented. Emphasis on computer modeling of systems.

Chamberlin

551 Symmetrical Components (3)

Prereq: perm. Circuits analysis by symmetrical components, representation of unbalanced polyphase currents and voltages by component symmetrical sets, solutions of faults on power systems, unbalanced operation of power equipment, single phase induction motor analysis

Jaleeli, F

Electrical and Computer Engineering

Programs leading to the master of science and doctor of philosophy degrees are offered. Areas of interest include computers and control systems; communications, information and electronic circuitry; energy conversion and power systems; electromagnetics; avionics, applied instrumentation, and remote sensing; network theory.

To enter the master's program the applicant must have a B.S. degree in electrical engineering or an equivalent degree in physical science, mathematics, or engineering. Deficiencies must be made up by self study or by auditing (or taking without graduate credit) appropriate undergraduate courses.

Applicants with degrees other than B.S.E.E. or with degrees from *nonaccredited* (ABET) institutions may improve chances of admissions by submitting GRE scores including the advanced tests in electrical engineering.

To enter the Ph.D. program the applicant must have an M.S. degree in electrical engineering or equivalent in the physical sciences, mathematics, or engineering.

The master's degree requires 45 quarter hours including up to nine hours of thesis or 48 quarter hours including three hours of project. The Ph.D. requires 45 quarter hours of formal course work beyond the M.S. and a minimum of 45 hours of dissertation.

The applicant is encouraged to enter the program in the fall quarter. However, the department will accept students in other quarters. The deadline for receipt of applications for financial aid is March 31.

504 Thin Film Technology (3)

Prereq: perm. First part reviews theories concerning evaporation, film growth and structure, potential well, energy band theory, surfaces and interfaces. Second part covers topics in thin film such as conduction mechanism in thin films, thin film materials. Last part surveys application of thin film in today's electronics circuitry.

Sedehi

505 Semiconductor Principles (3)

Simplified 1-dimensional band theory of solids. Valence and conduction band occupancy from Fermi-Dirac statistics. Hole conduction and doping. Derivation of PN junction volt-amp-temperature characteristic. DC and AC characteristics of junction transistors derived from fundamentals.

Curtis, F, D

506 Advanced Electronic Circuits I (3)

Prereq: perm. Advanced analog circuitry. Operational amplifiers, characteristics, limitations. Linear and nonlinear applications. Feedback, stability criteria, compensation, time and frequency response. Waveform generation and shaping, timing, comparison, arithmetic operations.

Gilbert, S, Y

507 Advanced Electronic Circuits II (3)

Prereq: perm. Advanced digital circuitry. Basic logic operations, digital device families and characteristics. Arithmetic, counting, memory, other MSI and LSI functions. Numeric display devices. Analog digital conversion

Gilbert, F, Y

510 Semiconductor Principles II (3)

Prereq: 505 or perm. Continuation of 505. Application of semiconductor theory to solid state devices, diodes transistors, FETs and Gunn effect devices. Charge control analysis. Ebers-Moll equations. Electro-optical effects

Curtis, Sp

552 Power Transmission (3)

Prereq: perm. Economic and electrical principles of electrical power lines, mechanical principles of transmission line design and environmental effects.

Staff; W.

553 Power Distribution (3)

Subtransmission systems, distribution substations, primary and secondary distribution; description, specification, application, and selection of conductors, cables, capacitors, circuit breakers, related protective relays, instrument transformers, meters, transformers, fuses, load break switches, isolators, and other elements used in power distribution; arrangements and applications of different types of distribution substations, distribution panels, system grounding, and emergency generation.

Jaleeli.

558 Power System Stability Studies (3)

Prereq: perm. Problems pertaining to stability of large power systems, both synchronous and asynchronous loadings, maximum use of digital computer techniques, and matrix algebra. Student will present paper on individually assigned problems.

Jaleeli; W.

561 Digital Systems I (3)

Postulates and fundamental theorems of Boolean algebra; algebraic and map methods for design of combinational logic and simple sequential circuits; logic minimization methods; introduction to system design using shift registers, counters, etc.

Klock; F; Y.

562 Digital Systems II (3)

Prereq: 561. Basic concepts from theory of finite-state machines; analysis and synthesis of sequential circuits; study of state assignment; synchronous and asynchronous machines; system design using integrated circuits.

Klock; W; Y.

563 Digital Systems III (3)

Prereq: 562. Synthesis of sequential circuits using ROMs and RAMs for control logic. Introduction to computer organization and design including selection of instruction set, register and bus organization, and implementation of control logic with microprogrammed control.

Klock; Sp.

570 Communication Engineering (3)

Prereq: perm. Unified approach to communications stressing principles common to all transmission systems. Review of Fourier series. Fourier integral and complex frequency techniques with emphasis on communication networks, time response and convolution, measurement of information, amplitude modulation (double and single sideband techniques), frequency modulation, sampling theory, pulse modulation systems, with emphasis on modern digital signaling techniques including PCM, DPCM, PAM, PDM, PPM, and DELTA modulation, fundamentals of random signal theory and its application to communication systems; noise figure, noise suppression techniques; and other related topics.

Essman; F; Y.

571 Statistical Analysis (3)

Prereq: perm. Analysis of engineering problems using probabilistic and statistical concepts; probability, discrete and continuous random variables, distribution functions, means, moments, characteristic functions, statistical independence, correlation, estimation, and applications to engineering problems.

Essman; W; Y.

572 Random Signals in Linear Systems (3)

Prereq: perm. Introduction to random electrical signals and noise. Autocorrelation, cross-correlation, power spectra, Nth law detectors, matched filters, detection of signals in noise, optimum receivers, Bayes estimators.

Essman; Sp; Y.

590 Special Topics (1-6)

Prereq: perm. Selected topics of current interest in electrical engineering.

Staff; Y.

590S Power System Analysis (3)

Prereq: perm. Bus admittance matrix, load flow problem and its solution with use of Gauss-Seidel and Newton-Raphson methods, power flow control. Stability problem, swing equation, equal area criterion, numerical solution for swing curve. Students assigned to use digital computer for solving load flow and stability problem.

Jaleeli; W.

590U Small Microprocessor Systems (3)

Prereq: 507. Elements and interrelations of a microcomputer presented by case study of small prototype. Hardware and software integration, operator interface, program storage and retrieval.

Gilfert; W; Y.

590W Mini- and Microcomputers (3)

Prereq: perm. Organization of several minicomputer and microcomputer systems. Theory and application of assemblers, loaders, etc. Numerous control and data acquisition problems programmed in assembly language on existing computers. Applications in wide range of areas studied.

Klock; F; Y.

590X Mini- and Microcomputers II (3)

Prereq: 590W. Continuation of 590W.

Klock; W; Y.

590Y Digital Signal Processing (3)

Prereq: perm. Digital techniques for various signal processing applications. Emphasis on design and realization of digital algorithms for performing specific filtering function. Topics include: sampled-data signals, discrete-time system analysis; frequency response and realization of discrete-time systems; infinite impulse response digital filter design; finite impulse digital filter design; discrete and fast Fourier transforms.

Essman; D.

590Z PCM Telemetry Systems (3)

Prereq: 571 or perm. In-depth study of pulse code modulation systems using total system error (sampling error, quantization error, and channel error). Uniform and nonuniform quantization; companding (μ - and A -law); optimum quantization; coding, DPCM (differential pulse code modulation), LDM (linear delta modulation), ADM (adaptive delta modulation). Comparison of systems and trade-off analysis.

Essman; D.

623 Nonlinear Analytical Techniques (3)

Prereq: perm. Dynamic systems-use and limitations of phase plane portraits in characterization of nonlinear components and nonlinear activation. Nonlinear phenomena and classification of singularities. Role of forcing function. Solutions found through methods of residues and variation of parameters. Selection process as means for decision making in problem solution; influence of selected criteria. Applications to networks, controlled systems, and optimal control systems. Problems and techniques of Poincaré, Lienard, and others. Systems with analytical solutions. Linearization techniques and error-tolerance determination.

Raju; Su; D.

645 Electromagnetics II (3)

Prereq: 543. Duality, uniqueness, equivalence principle, image theory. Green's functions. Plane and cylindrical wave functions. Waveguides and resonators.

H. Chen; W.

646 Electromagnetics III (3)

Prereq: 645. Wave propagation in anisotropic medium; special theory of relativity; electrodynamics of moving media; perturbational and variational techniques.

H. Chen; D.

660 Digital Circuitry (3)

Prereq: perm. Physical theory of bipolar and MOS integrated circuits; study of properties of TTL, MOS, CMOS, and ECL circuits; dynamic and static semiconductor memories; design of integrated circuit chips; system design using LSI modules.

Staff; Sp; D.

674 Information Transmission (3)

Prereq: 571. Definition of measure of information and study of its properties, efficient representation of discrete message sources, communication channels and their capacity, encoding and decoding of data for transmission over noisy channels and evaluation of bounds to probability of decoding errors, and algebraic theory of error correcting codes.

Staff; D.

675 Introduction to Plasma Dynamics (3)

Prereq: 543. Particle orbit theory, magnetoionic theory, waves in cold plasmas, waves in warm plasmas.

H. Chen; D.

681 Research in Electrical Engineering (1-6)

Prereq: perm.

Staff; F, W, Sp, Su; Y.

695 Thesis (1-9)

Prereq: perm.

Staff; F; W; Sp; Su; Y.

698 Seminar (1-4)

Staff; F; W; Sp; Su; Y.

710 Digital Computer Design I (3)

Prereq: 563 or perm. Design of minicomputers and microcomputers with emphasis upon computer architecture, selection of instruction sets, memory organization, bussing, etc.; CPU design; I/O controller design; system controller design and realization with PLAs and microprogrammed control techniques.

Klock; F; Y.

711 Digital Computer Design II (3)

Prereq: 710. Continuation of 710.

Klock; W; Y.

712 Automata Theory (3)

Prereq: perm. Development of capabilities and limitations of computers and other digital systems in terms of Turing machines, push-down automata, and other organizations; relations between grammar of a computer programming language and machine which accepts the language.

Klock; Sp; D.

716 Active Network Theory I (3)

Prereq: grad rank. Provides background for other grad courses. Topics such as passivity, activity and causality; indefinite-admittance matrix; active 2-port networks; theory of feedback amplifier; stability of feedback amplifiers; and multiple-loop feedback amplifiers. (Recommended for all grad students.)

Staff; F.

717 Active Network Theory II (3)

Prereq: perm. Complex normalized scattering matrix. Broadband limitations on network performance. Theory of broadband matching and design of equalizers. Theory of negative-resistance amplifiers.

Staff; W; Y.

718 Network Topology (3)

Prereq: perm. Fundamental concepts in linear graph theory, matrix representation of linear graphs, properties of incidence, circuit and cut-set matrices, concept of duality, derivation of topological formulae for linear lumped networks, application to analysis and synthesis of communication nets.

Staff; Sp; Y.

721 Multipoint Synthesis (3)

Prereq: 511, 512. Positive-real and bounded-real matrices. Synthesis of lossless n-ports. Synthesis of n-ports with prescribed immittance matrix. Scattering synthesis.

Staff; D.

771 Fundamentals of Statistical Communication Theory (3)

Prereq: 571. Analysis of nondeterministic signals in linear systems with specific applications to communication systems. Topics include waveform estimation, matched filters, optimum systems, smoothing and prediction, Nth law detectors, digital communication systems, sampling quantizers, encoding, channel error, detection, etc.

Essman; F; D.

772 Modulations Systems (3)

Prereq: 771. Performance of familiar communication systems within context of statistical concepts and random noise representations, correlation and spectra analysis and narrow band noise, linear modulation, synchronous demodulation, suppressed carrier techniques, angle modulation, noise in FM, threshold effects in FM, frequency division, multiplexing, correlation detection, coherent binary signaling, coherent phase-reversal keying, differential phase-shift keying, optimum detection and decision theory. Individual problems associated with state of art techniques.

Essman; Sp; D.

773 Digital Detection Systems (3)

Prereq: 771 or perm. Detection of digital signals using decision theory concepts, conventional and unconventional communication systems, channel characteristics, Hilbert transforms, signal space representations, optimum detection of known signals, detection of signals with finite number of unknown parameters, estimation, estimator-correlator receivers, and suboptimum receivers. Techniques and problems from current literature.

Essman; W; D.

776 Advanced Plasma Dynamics I (3)

Prereq: 675. Distribution function and Boltzmann equation, transport equation, BV equation, and relaxation model. Landau damping, kinetic treatment of waves in plasmas.

H. Chen; D.

777 Advanced Plasma Dynamics II (3)

Prereq: 675, 776. Continuation of 776. Boltzmann collision term, Chapman-Enskog expansion, BBKY equations for plasma, confinement, and stability.

H. Chen; D.

778 Boundary Value Problems I (3)

Prereq: perm. Partial differential equations derived from engineering problems. Topics include linear spaces and operators, eigenvalue and eigenfunctions, Sturm-Liouville systems and Orthogonal functions, separation of variables in special coordinate systems, generalized Fourier series, and integrals.

H. Chen; W; D.

779 Boundary Value Problems II (3)

Prereq: perm. Techniques for solving boundary value problems, Green's functions and generalized functions, special methods making use of symmetries, images, inversion and conformal mapping; introduction to integral equation method.

H. Chen; D.

790 State Variable Analysis (3)

Prereq: perm. Provides background for other courses. Introduction to state variable vector-matrix differential (difference) equations for linear and nonlinear continuous (discrete) systems, processes, etc., solution of state variable equations; flow graphs; transformations; stability concepts; controllability and observability; analysis of nonlinear systems using state variable methods.

Raju; F; Y.

791 Control System Optimization I (3)

Prereq: 790. Extrema of functions of several variables, constrained extrema problems, linear programming; parameter optimization techniques, maximum principle, dynamic programming, design of optimal systems using quadratic performance criteria.

Raju; W; A; 1978.

792 Control System Optimization II (3)

Prereq: 791. Continuation of 791. Sensitivity in optimal systems; optimization problems with state and control variable constraints, computational algorithms for solution of optimization problems. Introduction to Wiener-Kalman-Bucy filtering, large-scale systems.

Raju; Sp; A.

793 Stability Theory (3)

Prereq: 790. Definition of equilibrium points; phase plane analysis; limitations of linear analysis. Concepts of stability, asymptotic stability, global asymptotic stability. Use of Liapunov functions and contraction arguments in establishing stability criteria. Methods of Lure, Lagrange, Popov, Sandbery, etc. Determination of stability of linear time invariant, linear time varying, and nonlinear systems.

Raju; W; A.

794 Adaptive, Learning, and Self-Organizing Systems (3)

Prereq: perm. Fundamental concepts underlying adaptive, learning, and self-organizing systems. System identification, use of gradient methods, peak-holding systems, application of adaptive principle to autopilot and communication systems. Model reference adaptive control, dual control. Pattern recognition, discriminant functions, training in classifiers, statistical classification, feature selection and ordering, non-parametric procedure, Bayesian learning, stochastic approximation.

Raju; Sp; A.

795 Stochastic Control Systems (3)

Prereq: 790. Characterization of random processes, identification of signals, parameter and random variable estimation, stochastic optimal control problem, dynamics of stochastic systems, stochastic finite-state machines, stochastic discrete-time systems, stochastic continuous-time systems, Markov systems.

Raju; D.

819 Theory of Graphs I (3)

Prereq: MATH 510. Fundamental topics of graph theory such as connectedness, path problems, leaves and lobes, axiom of choice, matching theorems, directed graphs, acyclic graphs, and partial order.

Staff; D.

820 Theory of Graphs II (3)

Prereq: 819. Continuation of 819. Binary relations and Galois correspondences, connecting paths, dominating sets, covering sets and independent sets, chromatic graphs, and groups and graphs.
Staff; D.

844 Advanced Microwave Networks (3)

Prereq: perm. Analytical study of waveguide junctions. Impedance, admittance and scattering matrices formulations for waveguide junctions, eigenvalue problems, symmetrical devices and directional coupler, group theory and its applications to waveguide junctions.
H. Chen; D.

845 Computer Solutions of Electromagnetic Problems (3)

Prereq: perm. General techniques of solutions suitable for digital computation and their application to electromagnetic field problems of practical interest, matrix formulation of field problems, wire antennas and scatters, generalized network parameters, Galerkins method, Rayleigh-Ritz variational method.
H. Chen; D.

846 Special Topics in Engineering Mathematics (3)

Prereq: perm. Concentrated study of advanced mathematical techniques in analytical solution of engineering problems. Selected topics from recent and/or classical literature of applied mathematics, as integral equations, variational and perturbational methods, applications of theory of a complex variable, theory of distributions. Introduction to functional analysis.
H. Chen; D.

881 Doctoral Research (1-9)

Prereq: perm.
Staff; F, W, Sp, Su; Y.

890 Special Topics in Electrical Engineering (3)

Current developments in electrical engineering. Selected topics offered yearly. May be taken for repetitive and variable credit.
Staff; F, W, Sp; Y.

895 Dissertation (1-9)

Prereq: perm.
Staff; F, W, Sp, Su; Y.

Industrial and Systems Engineering

The Department of Industrial and Systems Engineering offers the master of science degree. Unlike the more traditional fields of engineering, ISE does not build its graduate work upon a highly specialized body of knowledge obtained at the baccalaureate level. Rather, it is more like a professional degree, similar to law or medicine. Each student builds upon his or her own particular background and experience with the goal of developing the necessary skills to analyze and design complex systems of human, technical, and economic resources within a wide variety of living and working environments.

Specialized study concentrations are available in a number of areas of faculty interest, including operations research and mathematical programming; systems simulation; decision theory; inventory and manufacturing control; engineering management; optimization theory; stochastic systems; and human factors engineering. Other concentrations include management information systems engineering; computer systems analysis; main frame, mini- and microcomputer industrial applications; industrial systems analysis and design; government and health care systems analysis; public policy and resource conservation; man-machine systems analysis and design; driver performance research and traffic safety; visual performance research; and engineering statistics and experimental design.

Descriptions for programs emphasizing computer applications, engineering management, human factors engineering, industrial systems, and operations research are available upon request. These descriptions outline the core courses, electives, and suggested courses outside the department. Students are expected to follow the core courses outlined in a given program. The specific program is designed by the student and his or her advisor. Resident students are required to file approved programs of study before the end of the first quarter of study.

The usual minimum requirements are 39 or more quarter hours of coursework and up to six quarter hours of thesis re-

search credit totaling 45 quarter hours. For students with undergraduate degrees in ISE at least 30 quarter hours must be selected from graduate-level courses in industrial and systems engineering. Students with non-ISE undergraduate backgrounds might be required to complete more than 30 quarter hours from graduate-level courses in ISE. Students receiving two or more quarters of departmental graduate associate support are expected to follow the thesis option.

The student may follow a nonthesis option. The minimum requirements for this program are 51 hours of coursework including a three credit-hour research project requiring independent study (694) and a written report which must be presented before a departmental seminar and filed in the department office. For the nonthesis option, students with undergraduate ISE degrees are required to select at least 36 quarter hours from graduate level courses in industrial and systems engineering.

Coursework can be completed outside of industrial and systems engineering. Many students use this opportunity to include a concentration in business administration, computer science, or other engineering fields.

Certain undergraduate/graduate courses are required in the undergraduate industrial and systems engineering program. Up to 12 hours of these courses may be taken for graduate credit subject to advisor approval. They are: 506, 515, 532, 535, 540A, 540B, 541, and 548. 533 and 583 are not subject to this limit. Up to six hours of independent study may be taken for degree credit in addition to 694 or 695. All resident graduate students are expected to register for three successive quarters of 630 (Seminar) beginning with their first quarter in residence. Research is required of all candidates for the M.S. degree.

Foreign graduate students must take ENG 305 (Technical Writing) within the first three quarters of residence or demonstrate proficiency. All graduate students in ISE are encouraged to continuously enroll until the completion of the M.S. degree.

Although a baccalaureate degree in engineering is an excellent, and perhaps the best, preparation for advanced work in industrial and systems engineering, it is by no means the only suitable background. Because of the diversity of the field, students from the physical and social sciences, including mathematics and computer science, are also successful graduates of the program. The department welcomes applicants from all fields. Each candidate is evaluated on previous academic record, work experience, and career goals. A student entering without an adequate background may be required to take additional hours of undergraduate work including statistics, FORTRAN programming, a survey course in principles of industrial engineering and other courses, depending on the degree of preparation of the student.

Equipment in the ISE Department includes computer-controlled devices to simulate automated industrial systems; advanced computer systems, peripheral devices and software packages; an instrumented research car with a TV driver-eye-movement system; and a G & W ASL Model 1998 computer-controlled eye-view monitor system. Graduate fellowships and graduate and research associateships are available.

500 Principles of Industrial Engineering (3)

Prereq: perm. Survey covering traditional industrial engineering concepts and practices such as engineering economy, plant location, plant layout, work design, project management, and quality control. (Not for graduate credit for ISE majors.) 3 lec.
F; Y.

504 Applied Engineering Statistics (3)

Prereq: calculus or perm. Introduction to efficient methods for data collection and analysis. Application of basic statistical tests, techniques, and experimental design concepts to engineering and science data problem areas. 3 lec. (Not for grad credit for ISE majors.)
Y.

505 Engineering Statistics I (3)

Prereq: calculus. Applications of probability theory to engineering problems. Discrete and continuous probability distributions, moment generating functions, functions of random variables.
F; Y.

506 Engineering Statistics II (3)

Prereq: 505 or perm. Evaluation of numerous probability distributions for discrete and continuous random variables as useful experimental engineering tools. Includes multivariate distributions and hypothesis testing.
W; Y.

507 Design and Analysis of Experiments (3)

Prereq: course in probability and statistics or perm. Design and analysis of engineering experiments approached from linear statistical model point of view. Blocking designs, full and fractional factorial designs, analysis of variance, and introduction to response surface methodology. 3 lec.

Sp; Y

510 Decision Analysis I (3)

Prereq: perm. Introduction to decision analysis and its applications. Modern utility theory and its application to decision making under risk emphasized. Examples selected from inventory, bidding, purchasing, maintenance, and investment policies. 3 lec.

F; Y

511 Decision Analysis II (3)

Prereq: perm. Basic theory and applications of Bayesian decision analysis. Emphasis on applications covering wide range of industrial and business problems. 3 lec.

D

515 Introduction to Systems Engineering (3)

Prereq: perm. Introduction to systems engineering concepts. Systems structure, open-loop and closed-loop systems, positive and negative feedback. Applications to production and inventory systems, population, and physical systems. Design project required. 3 lec.

W; Y

517 Analytical Foundations of Industrial and Systems Engineering (3)

Prereq: perm. Special analytical techniques introduced for solution of complex industrial and systems engineering problems. Calculus of finite differences, Fourier analysis, and use of transform techniques in linear system analysis; probability implications of transforms, and probability modeling. 3 lec.

F; Y

522 Seminar on Occupational Safety and Health (3)

Prereq: perm. Historical development of workman's compensation and industrial health and safety; review of federal activities in occupational health and safety with focus on contemporary public policy issues. Specific occupational health and safety issues are dealt with in seminar format.

D

523 Seminar on Transportation Systems (4)

Prereq: perm. Transportation systems analysis, design, and related topics. Emphasis on industrial and systems engineering approaches to analysis and synthesis. Topic concentration varies from qtr to qtr.

D

525 Probabilistic System Analysis (4)

Prereq: perm. Applied statistical techniques in selective design and evaluation of physical and nonphysical systems. Tolerances, errors, and variations in parameters of systems viewed in terms of probabilistic distributions and effects on output parameters. 3 lec, 2 lab.

D

527 Digital Computer Systems I (3)

Prereq: computer programming course. Overview of digital computer systems. Programming, storage organization, and search; number representations, conversions, and elementary arithmetic operations; addressing and instruction sequencing; multiprocessing, multiprocessing, and real-time systems.

D

528 Digital Computer Systems II (3)

Prereq: perm. Continuation of 527. See 527 for description.

D

530 Engineering Economy (3)

Prereq: perm. Economic analysis of engineering projects. Intended to provide both basic theory and practical experience in comparing alternatives for capital expenditures, alternatives for providing needed production or services, and alternatives for income generation. (Not for graduate credit for ISE majors.) 3 lec

Y

532 Inventory and Manufacturing Control I (3)

Prereq: perm. Design of inventory and manufacturing control systems. Forecasting, continuous and periodic review inventory systems. Relationship between production schedules and inventory. Material requirements planning. 3 lec

F; Y

533 Digital Computer Simulation (3)

Prereq: perm. Simulation of industrial problems utilizing digital computers. Practical queueing situations emphasized. FORTRAN and user-oriented simulation languages such as GPSS and CSMP used. Projects involving design of simulation programs required. 3 lec, 2 lab.

W; Y

534 Network Analysis and Scheduling (3)

Prereq: perm. Engineering project planning using such techniques as PERT and critical path method; shortest route; maximal flow; minimal spanning tree; flow graphs; GERT, and other network models. 3 lec.

Y

535 Quality Control and Reliability (3)

Prereq: perm. Application of statistics to control of quality and reliability in products and services. Design of acceptance sampling and process control systems, including attention to inspection and test methods. Design and implementation of quality assurance programs, nonstatistical dimensions, also treated. 3 lec.

W; Y

536 Project Management (3)

Development and utilization of network techniques to schedule activities, develop financial budgets, allocate resources, and control progress and costs of practical projects. (No credit for ISE graduate majors.) 3 lec.

D

537 Modeling and Analysis of Computer Systems (5)

Prereq: perm. Models of batch, time-sharing, or real-time computer systems. Simulation, queueing, scheduling methods, and probability applied. Colisted with CS 505A.

D

538 Modeling and Analysis of Computer Systems (5)

Prereq: 537. Continuation of 537. See 537 for description.

D

539 Information Systems Engineering (3)

Prereq: perm. Design of management information systems. Introduction to PL/I language, data structuring, and information systems analysis and documentation, storage, etc.

D

540A Industrial Plant Design I (2)

Prereq: perm. First course in 2-qtr sequence involving project to design manufacturing and storage facilities. Topics include product determination, plant location, analysis of drawings, estimation of production time for each operation, production scheduling and inventory control, selection of equipment, layout of facility, using both computer and conventional techniques, incentive wage systems, and quality control. 2 lec, 2 lab.

W; Y

540B Industrial Plant Design II (3)

Prereq: 540A. Continuation of 540A.

Sp; Y

541 Introduction to Operations Research (3)

Prereq: perm. Introduction to basic methodology of operations research in solution of industrial, engineering, and other problems. Application and mathematical structure of such topics as decision theory, linear programming, dynamic programming, replacement models, and queueing theory.

F; Y

542 Inventory and Manufacturing Control II (3)

Prereq: perm. Multi-echelon inventory systems, scheduling algorithms, horizon planning, control of integrated production, inventory and work-force systems. 3 lec.

W; Y

543 Work Design in a Technological Society (3)

Prereq: perm. Exploration of interaction between industrial and systems engineering and labor as an institution. Arbitration, technological change, and work organization. 3 lec.

D

544 Applications of Mathematical Programming (3)

Prereq: perm. Linear systems techniques for optimum solution of industrial, engineering, and other problems. Topics include assignment and transportation problems, simplex method, revised simplex, dual problem, and sensitivity analysis. 3 lec.

W; Su; Y

545 Systems Design (3)

Prereq: perm. Individual or small-group system design project.

D

548 Human-Machine Systems Engineering (3)

Prereq: perm. Role of operator as subsystem in human-machine systems. Design principles for information displays, equipment controls, workplace environments, and life support systems. Human factors experimentation and design project required. 3 lec.
Sp; Y.

550 Technology and Development (4)

Prereq: perm. Role of technology and engineering in development process. Typical topics include technology transfer, technology assessment and development; intermediate technology, appropriate technology, labor intensive technology and industrial development; rural technology. Contemporary and future consideration of relationships between technology and development process.
Sp; Y.

551 Human-Machine Systems Engineering Design (3)

Prereq: perm. Effects of physical environmental stressors on human in human-machine systems examined and appropriate countermeasures designed. Stressors include heat, cold, noise, vibration, lighting, radiation. Design project required. 2 lec, 2 lab.
D.

553 Information in Human-Machine Systems Engineering (3)

Prereq: perm. Role of information acquisition and processing examined. Eye scanning behavior emphasized, analysis of stimulus-response, input-output operations in information transmittal. Human factors experimentation and design project required. 2 lec, 2 lab.
D.

554 Advanced Problems in Human-Machine Systems Engineering (3)

Prereq: perm. Analytic and design consideration of complex human-machine systems. Human factors experimentation and/or design project required. 2 lec, 2 lab.
D.

559 Individual Research Problems in Human-Machine Systems Engineering (3)

Prereq: perm.
Y.

561 Fundamentals of Queueing Theory (3)

Prereq: ISE 517, or perm. Queueing theory and its applications. Single and multiple channels with various system parameters and queue disciplines. Both steady state and transient conditions investigated. Real-world data collection required. 3 lec.
Sp; Y.

562 Fundamentals of Dynamic Programming (3)

Prereq: course in probability or perm. Theory and application of dynamic programming to discrete and continuous multistage processors. Principle of optimality; forward and backward recursion; state and decision inversion; converging and diverging branch systems; feed-forward and feedback loops; computational algorithms and programs; stochastic dynamic programming. 3 lec.
D; Y.

563 Fundamentals of Non-Linear Programming (3)

Prereq: 544 or perm. Theory and application of integer programming, convex programming, geometric programming, gradient search methods.
D.

564 Reliability in Design (3)

Prereq: perm. Application of reliability theory to equipment or facilities design. Design of testing systems and procedures for effective reliability measurement and prediction. Analysis of overall system reliability as function of component reliability. 3 lec.
D.

565 Information Systems Design (3)

Prereq: perm. Design and control of information flow in organizations. Information storage and retrieval by data processing equipment. 3 lec.
D.

567 Environmental Systems Engineering (3)

Prereq: perm. Overview, analysis, and design of selected environmental systems. Problems selected from area of conversion, resource engineering, communication, bioengineering, transportation, pollution, engineering of large structures, and engineering of community systems. 3 lec.
D.

570 Fundamentals of Systems Theory and Methodology I (3)

Prereq: perm. Topics in systems philosophy, methodology, and viewpoint and their application to practical systems, systems design process, criteria selection, and evaluation; experiments for determining system parameters, interdependencies, and constraints. 3 lec.
D.

571 Fundamentals of Systems Theory and Methodology II (3)

Prereq: 570. Continuation of 570. See 570 for description.
D.

580 Seminar on Public Policy and Resource Conservation (3)

Prereq: perm. Exploration of various manifestations of public policy at the national and state level through study of legislation relating to resource conservation and related topics. Engineering implications of these expressions of public policy. Specific content of seminar will change from yr to yr as new legislation appears.
D.

583 Work Design (3)

Prereq: 505 or perm. Design of work systems and measurement of work. Topics include job methods, operation analysis, charting techniques and schematic models, stop-watch time study, work sampling, predetermined time systems, standard data, incentive wage systems, and learning curves. 3 lec, 2 lab.
F; Y.

589 Special Investigations (1-6)

Prereq: perm.
F, W, Sp, Su; Y.

590 Advanced Problems in Computer Application (1-6)

Prereq: perm. Special investigations of advanced systems and industrial engineering problems involving use of digital or analog computers.
F, W, Sp, Su; Y.

630 Seminar in Industrial and Systems Engineering (1)

Current topics and new developments in industrial and systems engineering.
F, W, Sp; Y.

632 Seminar on the Control of Inventory and Manufacturing Systems (3)

Advanced inventory control, scheduling, and forecasting techniques. Critical review of current literature on inventory and manufacturing control including advanced production scheduling and forecasting techniques, Box-Jenkins Methodology. 3 lec.
Sp; Y.

635 Seminar in Systems Applications (3)

Prereq: 515 or perm. Topics of general current interest and/or particular student interest. In-depth discussion of topics from lecture courses or current research including techniques for selection and decision-making.
D.

637 Seminar in Computer Systems (1-3)

Prereq: perm. Analytic examination of selected topics in computer system planning, design, and evaluation. Students present selected papers or their own research and class participates in constructive discussion. Representatives from government, industry, or other educational institutions invited to lead discussions on topics of current interest.
D.

640 Advanced Topics in Industrial and Systems Engineering (1-6)

Prereq: perm. Readings and lectures.
D.

681 Research (1-12)

Prereq: perm.
F, W, Sp, Su; Y.

694 Nonthesis Independent Research (3)

Prereq: perm.
F, W, Sp, Su; Y.

695 Thesis (1-12)

F, W, Sp, Su; Y.

Mechanical Engineering

Graduate areas of concentration include robotics, design for manufacturing, vibrations, machine design, engineering mechanics, stress analysis, automatic control, energy conversion, thermal machinery, heat transfer, two-phase flow, combustion, fluidization, and computer-aided design. Courses which contribute to contemporary engineering practice may be drawn from related areas.

The minimum requirements are 33 quarter credits of coursework and a thesis covering a research or an advanced design project. Students with prior professional experience in which research or design proficiency has been clearly established may substitute additional coursework in lieu of the thesis. In such cases, the minimum requirement is 45 quarter credits of coursework, including a report on a special investigation involving three to six quarter credits of effort. For the thesis program the major field should include at least 20 quarter credits. For the nonthesis program 27 credits in the major field are required.

Applicants with B.S. degrees in engineering or science are considered for admission. All applicants must demonstrate proficiency in basic undergraduate mechanical engineering subjects. Applicants not holding degrees from accredited engineering colleges may be required to make up deficiencies prescribed by the department and to submit satisfactory scores on the Graduate Record Examination.

504 Machine Design II (4)

Prereq: 403. Morphology and anatomy of engineering design. Inventiveness, engineering analysis, optimization, statistics, and decision making. Engineering design project.

Halliday, Adams; Y.

507 Fundamentals of Nuclear Engineering (4)

Prereq: perm. Nuclear engineering, including nuclear reactions, radiation detection and measurement, reactor control, radiation shielding, effects of radiation on materials, uses of radioactive materials.

Lawrence; D.

510 Advanced Vibrations Analysis (4)

Prereq: 592, perm. Vibrations of multi-degree-of-freedom, lumped, parameter systems and of continuous systems such as bars, beams, and plates; numerical methods of solution; use of Rayleigh-Ritz and Galerkin procedures.

Adams; F; D

512 Heat Transfer (4)

Prereq: 321, CE 340. Basic concepts of conduction in 1 or more dimensions, steady and transient modes. Radiation, dimensional analysis, fundamentals of convection in various modes, heat exchanger design. 4 lec. *Graduate credit for non-mechanical engineering majors only*

Staff, Y

513 Conduction and Radiation Heat Transfer (4)

Prereq: perm. Advanced analytical treatment of conduction and radiation heat transfer. Boundary value problems, orthogonal expansions, moving heat sources, multi-dimensional problems with varying boundary conditions, finite difference analysis, conformal transformations, radiation network matrix analysis, diffuse-specular exchange, Monte Carlo techniques, etc.

Chandran, Lawrence; D

514 Convection Heat Transfer (3)

Prereq: CE 546 or perm. Convection heat transfer. Hydrodynamic and thermal boundary layers in forced and free convection. 3 lec.

Staff, Sp

515 Thermal Stress Analysis (3)

Prereq: CE 528, perm. Thermal stresses developed in machine and structural components. Procedures for solving stress problems associated with elevated temperatures in such components as tubes, rods, and plates as encountered in nuclear reactors, engines, and airplane and missile structures

Adams, D

517 Design of Thermal Systems (4)

Prereq: perm. Design of systems in which thermodynamics and heat and mass transfer are major considerations. Emphasis on total design approach incorporating economic considerations and optimization techniques. Typical systems include power, propulsion, environmental, cryogenic

Lawrence, Y

518 Mechanical Engineering Experimentation (1)

Prereq: grad rank. Instruction in experimental procedure and experience in designing and executing laboratory experiments. Students plan and execute their own experiments to acquire answers to assigned problems. Variety of areas covered including control systems, energy conversion, fluid flow, heat transfer, motion measurements, stress-strain. Instructional guidance provided by entire mechanical engineering staff. Provides familiarity with variety of instrumentation and procedures. 3-qr sequence with experimental subjects phased with prerequisites.

Staff; F; Y

519 Mechanical Engineering Experimentation (1)

Prereq: grad rank. Continuation of 518. See 518 for description.

Staff; W; Y

520 Mechanical Engineering Experimentation (1)

Prereq: grad rank. Continuation of 519. See 518 for description.

Staff; Sp; Y

524 Gas Dynamics I (3)

Prereq: perm, CE 340. 1- and 2-dimensional gas dynamics-isentropic flow, flow with heat transfer, friction, shocks, generalized 1-dimensional flow. Applications to propulsion systems. 3 lec.

Staff; D

525 Vehicle Propulsion Systems (4)

Prereq: perm, 424. Applications of basic engineering disciplines to design and analysis of ground vehicle propulsion systems. Emphasis on new concepts. Extensive use of computer modeling. Term report required.

Staff; D

540 Direct Energy Conversion (4)

Prereq: perm. Coupled flows, irreversible thermodynamics, behavior of ionized gases, general principles of unconventional thermodynamics cycles; thermoelectricity, thermionics MHD, fuel cells.

Lawrence; D

545 Advanced Numerical Methods (4)

Prereq: CHE 500 or equiv. Numerical methods for solution of ordinary and partial differential equations, stability considerations and error estimates, application to variety of engineering problems, numerical method of lines and integration procedures for stiff ODE systems.

Chandran; W

550 Computer-Aided Design (4)

Prereq: perm or grad rank. Applications of contemporary computer-modeling techniques to solve complex problems in stress, heat transfer, dynamic systems, and fluid flow. Emphasis given to applications of these techniques to solve specific problems in mechanical-engineering design.

Staff

555 Robotics (3)

Prereq: perm. Design of intelligent devices. Interfacing of micro- and minicomputers with machines. Microprocessor characteristics, actuator characteristics, visual pattern recognition, design of devices. Theory and laboratory.

Lawrence; Y

570 Energy and the Environment (3)

Prereq: perm. Examination of ramifications of energy in contemporary society. Basic energy concepts; technical considerations of production of energy; conservation strategies; environmental and economic considerations; emerging energy technologies including nuclear, fusion, solar and wind power. Course designed to prepare individual for effective participation in societal actions related to energy and power.

D

584 Problems in Thermal Machinery I (3)

Prereq: perm, good academic record. Supervised research in thermal machines. Individual work on experimental or analytical project involving current problems. Students should elect 2-term sequence to allow adequate time for completion of meaningful project

Staff, D

585 Problems in Thermal Machinery II (3)

Prereq: perm. Continuation of 584. See 584 for description.

Staff, D

586 Problems in Thermal Machinery III (3)

Prereq: perm. Continuation of 584 and 585. See 584 for description

Staff, D

589 Special Investigation (1-6)

Prereq: perm.

Staff; F, W, Sp; D; 1978.

591 Mechanical Vibrations I (3)

Prereq: perm. Characteristic phenomena of mechanical vibrations encountered in machines and structures (of 1-degree-of-freedom) in their quantitative investigation. Simple harmonic motion; free, transient, and forced vibrations; damping effects; demonstrations; computer applications.

Adams; Y.

592 Mechanical Vibrations II (4)

Prereq: 591. Application of matrix methods; 2-degree-of-freedom systems; lumped mass systems with several degrees of freedom; and methods for normal mode determination. 3 lec, 1 computation session.

Adams; Y; 1979.

593 Lubrication and Bearing Analysis (3)

Prereq: perm. Concepts of boundary, hydrostatic, and hydrodynamic lubrication and their application to different bearing geometries. McKee and McKee, Boyd and Raimondi methods of bearing design and their optimization. Solid lubrication, porous and gas bearings. Lubrication and wear in living and artificial human joints and human hip-joint prosthesis.

Halliday; D.

594 Advanced Machine Design (3)

Prereq: perm, 403. Advanced considerations in design and analysis of machine members, pressure vessels, impact loading, thermal stress analysis, fatigue in metals. 3 lec.

Adams; D; 1979.

595 Introduction to Kinetic Theory and Statistical Thermodynamics (4)

Prereq: perm. Kinetic theory, classical and quantum statistical mechanics with application to engineering devices. 3 lec.

Lawrence; D.

596 Experimental Methods in Design (3)

Investigation and evaluation of experimental methods used to obtain design and performance data. Techniques of photoelasticity, strain measurements; and vibration measurement.

Adams; D.

597 Methods of Engineering Analysis I (4)

Prereq: perm, MATH 340. Methods of analyzing equilibrium and eigenvalue problems in mechanical engineering and engineering mechanics; matrix methods, variational methods; numerical methods.

Adams; F; Y.

681 Research (1-6)

Staff; F, W, Sp, Su; D.

ENGLISH LANGUAGE AND LITERATURE

The Department of English Language and Literature offers graduate courses in the areas of English and American literature, the English language, creative writing, and comparative literature. Programs leading to the degrees of master of arts in English and doctor of philosophy in English are available in each of these areas.

MASTER'S PROGRAM

Programs are offered leading to the master of arts degree in English in the areas of English and American literature, English language, creative writing, and comparative literature. As an additional option to the student, each program is subdivided into predoctoral and general plans of study.

Admission

Application must be made to the Office of Graduate Student Services. The applicant should present at least 27 quarter hours (18 semester hours) of superior work on the undergraduate level in English language and literature and submit evidence of having completed at least two years of college work in a foreign language. Applicants who have not had two years of a foreign language, but

who otherwise have outstanding qualifications for graduate study, may apply. Applications for admission will also be considered from students who have had extensive training in academic fields closely related to English. All applicants should arrange for letters of recommendation from three professors with whom they studied on the undergraduate level to be sent to the chairman of the graduate committee in English.

All applicants for admission take the Graduate Record Examination (including the advanced test in literature) and submit their scores.

If a student is admitted to one of the master's programs without having taken the GRE, he or she must take this test the first time it is offered at Ohio University after he or she has enrolled. All applicants should have letters of recommendation from at least three previous teachers.

Applicants for the creative writing program must also submit to the director of the creative writing program manuscripts or off-prints representative of their work.

General Requirements

All master's programs require the following:

Minimum Hours of Graduate Credit

The master of arts degree requires a minimum of 60 quarter hours of credit in the predoctoral plans and 70 quarter hours in the general plans. A graduate student with no regular teaching responsibilities can accumulate 60 hours of credit in four quarters of full-time study.

Foreign Language

A reading knowledge of one foreign language is required for the master's. Any candidate who has successfully completed the first two years of a foreign language (approved by the department) at the college level will be considered to have satisfied the foreign language requirement. Any candidate who cannot so satisfy the requirement must demonstrate his or her ability to read a foreign language (approved by his or her advisor) by passing either a departmental reading examination in that language or two quarters of the graduate reading course in that language. The reading course carries no credit toward graduation.

Teaching

Each candidate must enroll in ENG 591. Some teaching or research under supervision is required of all students in graduate programs in English language and literature.

Courses and Examinations

The fundamental requirement for the M.A. in English is a pattern of courses covering four (predoctoral plan) or six (general plan) different fields of literature; and a minor area (three courses), as specified in the pamphlet *Graduate Study in English* (available on request from the Department of English). Specifically required courses include The Teaching of English (first quarter) and Bibliography and Methods (second quarter).

Normally, the candidate will take a two-quarter proseminar sequence offered in the second and third quarters, which will include the writing of a scholarly or critical essay roughly equivalent in scope to a master's thesis. The student may choose to write a thesis instead of taking the proseminar, but is likely to find the process a good deal more arduous and time-consuming, and the thesis program is generally not recommended. M.A. candidates in the creative writing program ordinarily do not take the proseminar but produce instead original writing under the direction of members of the creative writing staff.

The final requirement for the M.A. in English in the predoctoral plan is a written comprehensive examination, based on a reading list distributed early each academic year. Students in the general plan satisfy this requirement through courses in the six areas mentioned above and outlined in *Graduate Study in English*.

Qualified applicants may apply for admission for any quarter. Applicants who seek financial aid for the following academic year must submit application materials no later than March 1.

Programs

English and American Literature

This program emphasizes the historical-critical study of English and American literature. It is offered in predoctoral and gener-

al plans. The normal course of study will include one quarter of bibliography and methods (five hours), a two-quarter proseminar sequence (winter and spring), a three-course minor, and 30 (predoctoral plan) or 40 (general plan) hours of additional coursework. A student may choose to write a thesis instead of taking a proseminar sequence, but this is not recommended. Courses will be selected so that a student's program of study will cover all broad areas of English and American literature.

In his or her final quarter of graduate study the predoctoral-plan candidate must pass a written major examination based on a reading list in English and American literature. A candidate in the general plan meets this requirement by two additional area courses.

Creative Writing

This program differs from the preceding historical-critical program in that the student substitutes three creative writing seminars (ENG 690, 691, 692) for the minor and presents in lieu of a thesis a book-length manuscript worthy of publication. The program is offered in predoctoral and general plans.

English Language

This program, offered in both predoctoral and general plans, is designed for students who wish to prepare themselves to teach college courses in the history and the structure of the English language and in the literature of the medieval period. Students in this program will meet the following requirements:

Sixty hours of coursework, including ENG 501A, B, C, 502, 503, 569B, 591, and 593; LING 550 and 560; and a two-quarter proseminar sequence in the English language or in a medieval literature.

Students in the predoctoral plan take a comprehensive examination which covers the history and structure of the English language and major works in the medieval period of English literature. Those following the general plan are guided by the English Language Committee in selecting two area courses beyond the 60-hour minimum.

Individual programs to meet these requirements will be planned in cooperation with the student's advisor.

English with Comparative Literature Concentration

The Comparative Literature Concentration provides qualified graduate students a broader, international perspective in their program of study. The study of British and American literature is supplemented by a study of parallel developments in related foreign literatures. Entering students electing this concentration should already have substantial training in at least one foreign language and literature. The program is offered in both predoctoral and general plans; degree requirements in each plan are specified in *Graduate Study in English*.

DOCTORAL PROGRAM

Programs are offered leading to the doctor of philosophy degree in English and American literature, English language, and in English with concentration in comparative literature. Doctoral study is divided into two phases: the doctoral applicancy and the doctoral candidacy.

Admission

After receiving the master's degree, the student may apply to the graduate committee of the department for admission to advanced graduate study. The application will be considered in light of (1) the student's academic performance in the master's program, particularly in the proseminar or on his or her thesis; (2) performance on the comprehensive examination; (3) the recommendation of his or her major professor or professors; (4) the evidence he or she has given of becoming a successful teacher of English.

The student who has taken the master's degree at a school other than Ohio University and who desires to be admitted to one of the doctoral programs must apply for admission to the Office of Graduate Student Services. In addition to official transcripts showing the total undergraduate and graduate academic record, the application for admission must include his or her scores on the Graduate Record Examination and letters of recommendation from at least three professors with whom the student studied in his or her master's program.

Programs

English and American Literature

This program emphasizes the historical-critical study of English and American literature, permitting a concentration in an area of special interest, the limits of the area to be defined by the student's advisory committee and approved by the graduate committee. Minimum requirements for this program are found in the section below headed Doctoral Applicancy.

English Language

A student wishing to enter this program must hold an M.A. in the English language or its equivalent. The general requirements are as follows:

All students take ENG 504 and 531, LING 650 and 671, and a combination of at least three doctoral seminars to include work in both the English language and medieval literature.

In consultation with his or her advisor the student will select additional courses in language, literature, and linguistics.

Concentration in Comparative Literature

Students with M.A. degrees in English may be admitted to this program. Students in this program will designate comparative literature as their area of concentration and will enroll in the three-quarter comparative literature seminar sequence. All must meet their language requirement by studying one language intensively and by taking a graduate minor (at least 12 hours) in the literature of that language. In addition, a sound reading knowledge of a second foreign language and participation in the translation workshop are required. In most other respects, students concentrating in comparative literature will meet the general requirements for the Ph.D. in English.

Doctoral Applicancy

If accepted for advanced graduate study, the student becomes a doctoral applicant. Toward the end of the first year of study as a doctoral applicant, his or her progress will be reviewed by the English department graduate committee. The student will be advised at that time whether he or she should continue in the program. The student will remain an applicant until the following requirements have been fulfilled:

1. *The M.A.* Students whose M.A. programs did not include the following requirements, or their equivalent, must fulfill them as part of the Ph.D. program.

- I. The Teaching of English (ENG 591)
- II. Bibliography and Methods (ENG 593)
- III. A course in the history of the English language
- IV. A minor
- V. The Written Master's Comprehensive Examination

2. *Supervised Teaching.* Teaching associates teach one course per quarter and enroll concurrently in ENG 792, Problems in the Teaching of English. Doctoral candidates who are not teaching associates consult with their advisors about appropriate ways to fulfill the requirement.

3. *Foreign Language.* This requirement is satisfied by taking one graduate course in the literature of the language, which is taught in that language. Students whose proficiency in a foreign language is low should probably take the noncredit graduate reading course in the language first. For students working in some areas, medieval or Renaissance, for example, more than one language may be recommended.

4. *Literary Criticism.* Each student must take or have taken at least one course in the general area of literary criticism.

5. *Doctoral Seminars.* A minimum of three quarters of doctoral seminars is required; two seminars are to be in the student's area of specialization. A student should not elect a course at the 700 level without a fairly extensive knowledge of the subject matter.

6. *Other coursework.* Students are expected to take at least three other graduate courses. With approval of the student's graduate advisor, the candidate may elect graduate courses offered by other departments when these are closely related to his or her special interests.

7. *Doctoral Examinations.* These examinations are based upon a comprehensive reading list of works in the student's area of concentration. The written portion of the examination, lasting about eight hours, will be followed (normally a week or so later) by an oral examination exploring further the candidate's command of his or her area. The examining committee will pass or fail the stu-

dent on the basis of total performance on the entire examination (i.e., the written and oral portions are part of one examination, not two separate examinations).

8. A *satisfactory prospectus* for the dissertation is presented to the student's committee.

Doctoral Candidacy

In this final phase of work, the candidate will complete his or her dissertation. The graduate committee recommends that the dissertation be limited to approximately 150 pages whenever possible.

In lieu of the traditional oral examination the candidate will deliver a public lecture on some aspect of his or her dissertation and will lead a discussion upon his or her work.

501A English Language (5)

Historical survey of sounds, inflections, syntax, and vocabulary of Old and Middle English. 501A covers Old English.

Staff; F; Y; 1981-82.

501B English Language (5)

Prereq: 501A. Continuation of 501A. 501B covers Anglo-Saxon and Early Middle English.

Staff; W; Y; 1981-82.

501C English Language (5)

Prereq: 501B. Continuation of 501A and B. 501C covers Middle English.

Staff; Sp; Y; 1981-82.

502 Old English Poetry (4)

Prereq: 1st and 2nd qtr of 501 or equiv. Translation and criticism of Old English verse.

Staff; Sp; D; 1980-81.

503 English Language II (5)

Sounds, inflections, syntax, and vocabulary of English from 1500 to present. Emphasis is upon language of Shakespeare.

Staff; Sp; A; 1982-83.

504 American English (5)

Phonology and grammar-syntax of American English from a linguistic point of view; historical and geographical development.

Staff; A; Sp; 1981-82.

505 Old Norse (5)

Basic Old Norse grammar with introductory readings.

Staff; D; 1982-83.

506 Icelandic Saga (5)

Prereq: 505. Reading in Old Icelandic literature in original language.

Staff; D; 1982-83.

511 18th Century Novel (5)

Development of novel form in 18th century. Defoe through Jane Austen.

Staff; F; A; 1981-82.

512 19th Century Novel (5)

Critical analysis of novels by Dickens, Thackeray, Trollope and the Brontës, Eliot, Meredith, and Hardy.

Staff; W; A; 1981-82.

515 19th Century Prose (nonfiction) (5)

Studies in nonfiction prose, mainly the personal essay, literary criticism, social criticism, biography.

Staff; D; 1976-77.

524 Shakespeare (5)

Intensive study in specific critical and historical problems.

Staff; Sp; A; 1981-82.

531 A Major Medieval Genre (5)

Development of major genre: lyric, epic, romance, or drama; close critical attention to representative texts.

Staff; F; A.

532 Renaissance Drama (1590-1642) (5)

English drama (excluding Shakespeare) from Ben Jonson to closing of theaters.

Staff; W; A; 1980-81.

536 History of Criticism (5)

Critical thought and practice.

Staff; F; A; 1982-83.

537 History of Criticism (5)

Continuation of 536.

Staff; W; A; 1976-77.

540 Studies in Comparative Literature (5)

Literary movements, themes, or genres. Different topic offered each quarter, e.g., symbolist and surrealist movement, baroque in western literature, concept of realism or romanticism, grotesque in literature. Note: Two of the three comparative literature courses (540-541-542) are offered annually. Numbers may vary.

Staff; F; Y; 1982-83.

541 Studies in Comparative Literature (5)

Continuation of 540. See 540 for description.

Staff; W; 1980-81.

542 Studies in Comparative Literature (5)

Continuation of 540 and 541. See 540 for description.

Staff; Sp; 1982-83.

555 English Education Workshop (1-5)

Prereq: teaching certificate or equiv or perm of instructor. Studies in principles, problems, approaches, and issues in teaching of English from elementary school to post-secondary. Topics determined according to need and demand.

Staff; F, Su; Y; 1981-82.

561 Colloquium (5)

Specific interdisciplinary problems to be assigned each quarter.

Staff; F; Y; 1982-83.

562 Colloquium (5)

See 561 for description.

Staff; W; Y; 1982-83.

563 Colloquium (5)

See 561 for description.

Staff; Sp; Y; 1982-83.

564 English Phonetics (3)

Speech sounds of English with special attention to articulatory training for foreign teachers of English.

Staff; D.

570 Studies in Literature (5)

Advanced study of a period or of some aspect of a period (a movement, a genre, author, etc.) of English or American literature. Designed to supplement undergraduate training and to provide intensified training in areas of concentration. Following areas scheduled regularly: (A) Medieval language and literature, (B) Age of Chaucer, (C) 16th Century, (D) Spenser, (E) 17th Century, (F) Milton, (G) Restoration, (H) Earlier 18th Century, (I) Later 18th Century, (J) Romantic poets: Blake, Wordsworth, Coleridge, (K) Romantic poets: Byron, Shelley, Keats, (L) Major Victorian poets, (M) Minor Victorian poets, (N) 20th Century, (O) American literature to Civil War, (P) American literature, Civil War to WWI, (Q) Afro-American literature.

Staff; F, W, Sp, Su; A, Y, D; 1982-83.

575 Teaching Technical Writing (3)

Problems in teaching technical writing. Practice in writing feasibility studies, proposals, progress reports, and a range of minor items from abstracts to letters of transmittal. Techniques and standards of good business and professional writing.

Cronin; W; 1981-82.

580 Internship (4-5)

Prereq: perm. Internships in various University offices provide students with first-hand, on-the-job experience in areas where they may usefully employ their verbal skills and aptitudes. Coordinated by and evaluated by graduate chairman in English and director of office in which student is placed.

Graduate chairman; W; Y.

585 History of Books and Printing (4)

Broad introduction to history of the book and its place in development of western culture from ancient world to present.

Staff; F; 1980-81.

591 Problems in Teaching College English (1-5)

Introduction to methods of teaching literature and writing, with inquiries into various critical approaches, remediation, rhetorical theory, teaching aids, evaluation, counseling and coordination of student, and institutional needs.

Staff; F; Y; 1982-83.

593 Bibliography and Methods (5)

Enumerative and descriptive bibliography; methods of criticism and scholarship.

Staff; W; Y; 1982-83.

601 Modern English Dialects (4)

Geographical distribution of American and Commonwealth English dialect features.

Staff; D.

609 Proseminar in English Language (5)

Research in structure and development of English language.
Staff; Sp; D.

640 Translation Workshop (1-5)

Prereq: perm: command of at least 1 foreign language. Intensive work in translating foreign literature, verse, and prose, into English.

Staff; F; D; 1981-82.

650 Proseminar in Literature (5)

2 qtr study, research and writing program. Winter quarter devoted to comprehensive reading in subject matter area, investigation of nature of literary problems relevant to this area and selection of problems appropriate to graduate writing of papers comparable in scope to master's thesis or scholarly papers.

Staff; W; Y; 1982-83.

651 Proseminar in Literature (5)

Prereq: 650. Continuation of 650. See 650 for general description. 651 devoted to further research and writing of papers.

Staff; Sp; Y; 1982-83.

690 Creative Writing Seminar (5)

Prereq: 6 hrs of creative writing. Criticism of manuscripts and discussion of problems of form. Admission only in 1st qtr, except for unusual reason.

Staff; F; Y; 1982-83.

691 Creative Writing Seminar (5)

Prereq: 6 hrs of creative writing. Continuation of 690.

Staff; W; Y; 1982-83.

692 Creative Writing Seminar (5)

Prereq: 6 hrs of creative writing. Continuation of 690 and 691.

Staff; Sp; Y; 1982-83.

695 Thesis (5-10)

Staff; F, W, Sp, Su; Y; 1982-83.

701 Formal Stylistics (4)

Research on selected topics in formal characterization of texts.

Staff; D.

703 Seminar in English Language (5)

Research into selected problems of structure and development of English language.

Staff; D.

715 Theory of Teaching Literature (5)

Discussions of theoretical and practical problems of teaching literature in colleges and universities.

Staff; D; 1981-82

724 Problems in Shakespeare (5)

Prereq: Ph.D. applicancy. Intensive research in specific problems in area of Shakespeare criticism and scholarship.

Staff; D; 1978-79.

763 Stylistics (5)

Prereq: Ph.D. applicancy. Problems in description and analysis of prose style; prosodic theory; literature and its writers.

Staff; W, Y; 1982-83

765 Theory of Literature (5)

Investigations into nature of literature and problems of practical literary criticism.

Staff; W, Y; 1982-83

770 Seminar in Literature (5)

Prereq: Ph.D. applicancy. 3 1- or 2-qtr seminars customarily offered each yr in each of 7 areas. Seminars form sequence of independent units. In any particular yr, more than 3 seminars may be offered in same area (e.g., a sequence in early Renaissance and 1 in late Renaissance or sequence in Romantic and 1 in Victorian). From 3 to 6 seminars may be offered in area, depending upon staff and upon student need. 770 covers Medieval literature.

Staff; F, W, Sp, D; 1982-83

771 Seminar in Literature (5)

Prereq: Ph.D. applicancy. See 770 for general description. 771 covers Renaissance.

Staff; F, W, Sp, D; 1982-83

772 Seminar in Literature (5)

Prereq: Ph.D. applicancy. See 770 for general description. 772 covers Restoration and 18th Century.

Staff; F, W, Sp, D; 1982-83

773 Seminar in Literature (5)

Prereq: Ph.D. applicancy. See 770 for general description. 773 covers 19th century.

Staff; F, W, Sp, D; 1982-83

774 Seminar in Literature (5)

Prereq: Ph.D. applicancy. See 770 for general description. 774 covers 20th century British and American.

Staff; F, W, Sp, D; 1982-83.

775 Seminar in Literature (5)

Prereq: Ph.D. applicancy. See 770 for general description. 775 covers American literature.

Staff; F, W, Sp, D; 1982-83.

776 Seminar in Literature (5)

Prereq: Ph.D. applicancy. See 770 for general description. 776 covers comparative literature.

Staff; F, W, Sp, D; 1982-83.

780 Special Studies Seminar (1-5)

Prereq: Ph.D. applicancy or perm. Seminars in individual writers and individual works. Offered when (a) there is student demand and or (b) widely recognized specialist on staff.

Staff; F, W, Sp, Su; Y; 1982-83.

781 Research (1-15)

Covers period when student is doing necessary research for prospectus. Also used to cover special research courses — e.g., problems in editing, problems in historical research, etc.

Staff; F, W, Sp, Su; Y; 1982-83.

782 Research (1-15)

Continuation of 781. See 781 for description.

Staff; F, W, Sp, Su; Y; 1982-83.

792 Problems in Teaching College English (1-5)

Colloquium for apprentice teachers designed to explore alternative approaches to classroom planning and presentation. Encourages exchange of ideas and problems among teachers; evaluation methods, syllabi, and texts; development of a sense of professionalism in teaching.

Staff; F, W, Sp, Su; Y; 1982-83.

895 Dissertation (1-15)

Staff; F, W, Sp, Su; Y; 1982-83.

ENVIRONMENTAL STUDIES

Graduate work leading to a master of science degree in environmental studies is available through an interdepartmental program. Four areas of concentration are available in this program:

1. *Biological Sciences* with courses selected from botany, microbiology, and zoology.
2. *Physical and Earth Sciences* with courses selected from chemical engineering, chemistry, civil engineering, geography, geology, industrial and systems engineering, and mechanical engineering.
3. *Environmental Design and Planning* with courses selected from economics, business administration, industrial and systems engineering, civil engineering, geography, and quantitative methods.
4. *Environmental Monitoring* with courses selected from chemical engineering, chemistry, geography, geology, and zoology.

Specific course requirements vary with each concentration. More detailed information may be obtained on request from the College of Arts and Sciences.

Admission

Admission to the program requires an undergraduate degree in one of the following fields: agriculture, biology, botany, chemistry, ecology, environmental studies, economics, engineering, forestry, geography, geology, microbiology, zoology, or their cognates. Students without a suitable background may be admitted, but will be required to take additional coursework. A transcript of undergraduate work and three letters of recommendation are required with the application. Application may be made at any time. However, students who are applying for financial aid (graduate associateship or tuition scholarship) must complete their applications by March 31.

Requirements

Each student seeking an M.S. in environmental studies is required to take at least 12 credits of core courses and at least 20 additional credits in his or her area of concentration. Students may elect to pursue either a thesis or nonthesis track. Both thesis

and nonthesis options require a minimum of 53 hours. In the thesis option, at least nine credits will be in thesis research. The remaining courses are to be decided upon by the students' advisory committee. In the nonthesis option, at least 21 credits will be in other graduate courses specified by the students' advisory committee, including three or more credits in a research-oriented course, such as a special investigation.

The core courses required of the student seeking a degree in this area are either Animal Ecology (ZOOL 575) or Population Biology (ZOOL 577), Geographic Perspectives on Resource Management and Conservation (GEOG 527), and Environmental Law (BUSL 570).

All students in the program will take a written, three-hour essay exam and an oral exam during their final quarter of study. The written exam must precede the oral exam by at least two weeks.

The program is administered by the director of environmental studies with the advice of a steering committee composed of faculty members from appropriate departments.

659 Seminar In Environmental Studies (3)

Prereq: enrollment in Master of Science in Environmental Studies Program. Provides forum for discussion and analysis of contemporary environmental problems. Topics will vary and depend on interests of seminar students.

Staff.

FILM

The Department of Film is an independent program within the College of Fine Arts at Ohio University. There are three full-time faculty members and one research associate. Due to the intimate nature of the program, current graduate enrollment is limited to 30 students.

Graduate studies in the Department of Film consist of two separate and distinct degree programs. The master of fine arts degree is a three-year course of study for individuals with a high degree of talent and potential in the field of motion-picture production or scholarship. Those who concentrate on film scholarship gain experience in production while pursuing study in film theory, criticism, and history. The program is designed for those seeking professional training for teaching film on the college or university level, or those planning to serve career apprenticeships in the film or television industries, or those desiring to make their way as independent filmmakers.

The master of arts degree is a one-year program for those seeking coursework in film theory, criticism, and history, with the possibility of continuing such work in a doctoral program.

The M.F.A. and M.A. programs are designed to allow entrance of students with no formal film training — those who come to film with extensive experience in another medium or academic discipline. Enrollment in either program requires a major commitment to film, although not necessarily prior achievement in filmmaking or film scholarship.

MASTER OF FINE ARTS

The master of fine arts degree program involves intensive coursework in the area of film production, film theory, or a combination of both. After completion of a core group of courses, students work on individual projects. The program is distinguished by this flexibility and by the wide variety of projects pursued by its students. All students are expected to develop professional production skills, enabling them to approach work in the medium as independent artists, to successfully enter the industry, or to teach college-level scholarship courses.

Facilities in the Department of Film are located on the third floor of Lindley Hall. There are several fully equipped sound editing rooms, several silent editing stations, a Steenbeck flatbed editor, and several projectors, including an interlock model. Equipment checkout inventory includes a CI 16-R camera and accessories, several Bolex, Bell & Howell Auricon, and Beaulieu cameras (some with sync sound capabilities), a Sony half-inch VTR unit. A variety of accessories, such as tripods, lights, lenses, is also available. For interdepartmental projects, the Department of Film has access to 3/4 inch color video cameras and editing facilities. The department also has two Acme-based animation stands, with Mauer cameras. Sound facilities include three Nagra

recorders, a variety of microphones, and complete transfer facilities.

The department also administers the Appalachian Regional Media Center, a film and video post-production facility in Athens, Ohio. Film editing equipment available there includes bench gear and a Moviola M-77 six-plate flatbed editor, complete with mixing facilities, and for video editing, a complete Sony 3/4" U-Matic system. The center exists to serve the needs of independent filmmakers in the region; these facilities are available to students in the M.F.A. program.

The department operates the Ohio University Film Production Laboratory, which offers complete 16mm black-and-white and color film processing and printing. The lab contains an optical printer. The lab offers professional services in all aspects of filmmaking. Students are able to participate closely in each production phase of individual projects.

While the major focus of M.F.A. courses is film production, the curriculum includes courses in film theory, criticism, and history. Also included are seminars in contemporary film esthetics. A minimum of 135 quarter hours of graduate study (including 16 hours of comparative arts and/or arts history) is required for graduation. Modifications of requirements may be made to suit the particular needs of individual students. Completion of the M.F.A. program usually requires three years. Awarding the M.F.A. degree is never automatic upon completion of 135 hours of graduate study, or upon any total period of time in residence. The following criteria are also used to evaluate a candidate's overall creative and scholastic performance — independent of the individual's academic record:

1. After completing three full quarters of work, student performance will be evaluated for advancement to candidacy standing. At this time, the student is required to present at least one completed film and at least one completed scholarly paper or written examination about motion pictures.
2. After one full year of study, and before approval for graduation, candidates are required to take a comprehensive written/oral examination on basic academic and technical knowledge of the motion picture process. The examination committee will be the Department of Film faculty. This examination will usually occur during the quarter immediately preceding graduation.
3. Candidates must arrange a public showing of their work, after first defending it before an examining committee. This thesis show must precede graduation. Candidates for the M.F.A. degree who elect to write a thesis must defend this thesis before an examining committee. The committees will comprise Department of Film faculty, augmented by one or two outside faculty, chosen by the candidates.

Failure twice at any stage of the evaluation process will result in denial of further enrollment as an M.F.A. candidate.

MASTER OF ARTS

The master of arts degree involves intensive coursework in the areas of film theory, criticism, and history. The curriculum is devoted to film scholarship; no motion picture production classes are required or expected. Under special circumstances, M.A. candidates may arrange to take such classes. The program's emphasis will be the development of students familiar with contemporary film studies, who will be qualified to continue graduate work in film.

The Department of Film contains a variety of film projection equipment, and two screening rooms. Projectors and a video playback unit and monitor may be used by students in conjunction with their coursework. For classroom presentation purposes, slide and still photography services can be arranged.

There are ample opportunities to study film in Athens, Ohio. The Department of Film supervises several programs which offer film screenings and related activities. The Athens Film Society, a student-based organization, offers classical and contemporary films on a weekly basis. Each spring, the Athens International Film Festival draws independent films, as well as more traditional films, along with people from the industry, into Athens. The festival is becoming increasingly important to the region as a cultural event. The department sponsors an annual Film Conference, which offers scholarly and critical presentations. Each fall, the department sponsors the Athens Video Festival, with a variety of programming. Each week, local theaters offer screenings of film classics to supplement their regular feature presentations.

The Department of Film publishes *Wide Angle*, a quarterly journal which has become internationally recognized in its three-year history. The journal is devoted to film theory, criticism, and practice. Students in the M.A. program may take an active role in the production of *Wide Angle*.

Opportunity for further film study is available through the resources of the Ohio University Fine Arts Library, which subscribes to 40 film periodicals and has over 2,000 volumes in its motion picture collection. Independent study arrangements are available to students who undertake research with collections in major archives. Similar arrangements are possible for those who are accepted for film study programs abroad.

The master of arts program involves a carefully defined course of study in film scholarship. Required curriculum includes a three-quarter sequence in film theory and criticism and three quarters of seminars in esthetics, ideology, structural analysis, and other contemporary issues in cinema. Also required is a graduate minor, composed of 15 hours of critical historical courses in such areas as comparative arts, English, linguistics, and or philosophy. Within this basic framework, each student may select the specific area he or she wishes to pursue. Independent study opportunities exist for those who wish to do advanced work in other related areas. The master of arts program involves 45 hours of graduate enrollment and is designed to be completed in one academic year.

Final degree requirements include a comprehensive written examination evaluated by members of the department faculty. One-third of this examination will comprise questions from the student's minor area. Failure twice at this stage of the evaluation process will result in denial of further enrollment as a master of arts candidate. There is no written thesis requirement for the degree.

ADMISSION

Because certain courses offered only once yearly must be taken in sequence, admission to both the master of fine arts and the master of arts programs is restricted to fall enrollment. Exceptions may be made upon petition by unusually qualified students.

A minimum grade point average of 2.5 for all undergraduate work and a bachelor's degree from an accredited institution are required for admission. The undergraduate degree may be in any field. Supporting documents normally required are a transcript of all undergraduate work, three letters of recommendation, and a formal application with fee.

All applicants should also send the following materials to: Ohio University, Department of Film, Lindley Hall, Athens, Ohio 45701. (Materials should be received by May 15th, for fall admission).

1. A sample of the student's written work. This need not be about film. The paper (or papers — more than one may be submitted) will be evaluated through the potential shown for work in the department.
2. A short (approximately 500 words) personal essay on the applicant's goals, including how the person would relate his or her previous education and experiences to goals in the department. A direct interview with faculty may be arranged in lieu of this essay.
3. M.F.A. candidates (only) are asked to submit film, videotape, or a portfolio of work from another medium, as substantial representation of personal creative abilities.

Transcripts, application, and fees should be sent directly to: The Office of Graduate Student Services, Wilson Hall, Ohio University, Athens, Ohio 45701. *Applications will not be processed until the application fee has been received.* It is the applicant's responsibility to ensure that all materials are received by the May 15th deadline.

Because the department has many applicants for its limited number of openings, prospective students are strongly encouraged to come to Athens for an interview. Personal interviews with faculty and students allow candidates a more comprehensive view of the programs available. Such visits also allow the graduate admissions committee a broader basis for evaluation.

The department presently has limited graduate assistantships and tuition waiver awards. These awards normally are given to students who have been approved for M.F.A. candidacy. Highly qualified students may receive assistantships and waivers during their first year on campus.

530 Film History I (4)

Prereq: 201, 202, or perm. Film history surveys development of film as an art form from its beginnings in 19th century to present. Though emphasis is on American film history, course will be international in scope. All major figures and film movements covered in this initial study of medium including Griffith, Chaplin, Eisenstein, Expressionism, The British Documentary Movement, etc. Keystone works by major filmmakers within significant movements as well as within historical time periods screened weekly.

Semsel.

531 Film History II (4)

Prereq: 530 or perm. Continuation of 520.

Semsel.

532 Film History III (4)

Prereq: 531 and perm. Continuation of 531.

Semsel.

537 The History of Film Theory (4)

Prereq: grad rank or perm. Historical development of film theory, from Vachel Lindsay and Hugo Munstenberg to present. Examination of significant theoretical texts from major periods and movements in growth of medium. Weekly screenings.

Semsel.

538 Documentary Film (4)

Prereq: 203 or grad rank. Development of naturalistic and polemic traditions; cinema verite and personal documentary. Weekly screenings.

Staff; W.

539 Experimental Film (4)

Prereq: 203 or grad rank. Evolution of nonnarrative motion pictures with emphasis on contemporary filmmakers. Weekly screenings.

Staff; Sp.

543 Scriptwriting (4)

Prereq: 201 or 202 or grad rank. 3rd-level course designed to improve student writing within Film Department and related areas. Complements theory and production courses in department, providing grad students opportunity to improve their ability to write scripts. Emphasis on development of technical writing skills through assignments which must be revised until they are acceptable scripts. After instructor has read and graded them, student writings are distributed among participants for in-classroom criticism. Lectures present established narrative forms and deal with problems of plot, dialogue, characterization and the like. Students also read text on scriptwriting and selections from published scripts.

Semsel.

561 Motion Picture Production I (5)

Prereq: perm. Professional workshop in 16mm techniques; elementary film structuring; camera and lighting; editing; sound; laboratory preparation. Intensive exercise as individual filmmaker in production of short motion pictures. *Not open to those who have had similar undergraduate courses.*

Prince; F; Y.

562 Motion Picture Production II (5)

Prereq: 561 and perm. Continuation of 561.

Prince; W; Y.

563 Motion Picture Production III (5)

Prereq: 562 and perm. Continuation of 562.

Prince; Sp; Y.

567 Filmmakers Workshop (5)

Prereq: 562 or perm. Continuing production workshop for students working in nontraditional and experimental directions, or whose interest is in personal, nonprofessional filmmaking. Topics vary with student needs or interests, but will include such subjects as: special effects cinematography, optical printing, autobiographical film, and gallery installation pieces. Each student must complete at least 1 film per term, or demonstrate significant progress on major work. Students must present for in-class criticism work-in-progress. Students may work in any gauge or in small video formats, if available to them.

Semsel.

601 Theory and Criticism of Film I (4)

Prereq: perm. Formal principles and stylistic fundamentals of film, including modes and methods of film criticism. Examination of major works of motion picture theory and criticism. Weekly screenings.

Lehman, F. Y.

602 Theory and Criticism of Film II (4)

Prereq: 601 or perm. Continuation of 601.

*Lehman; W; Y.***603 Theory and Criticism of Film III (4)**

Prereq: 602 or perm. Continuation of 602.

*Lehman; Sp; Y.***633 Seminar in Film I (4)**

Prereq: perm. Examination of works of American director. Weekly screenings.

*Lehman.***634 Seminar in Film II (4)**

Prereq: perm. Examination of works of foreign director or national cinema. Weekly screenings.

*Lehman.***635 Seminar in Film III (4)**

Prereq: perm. Advanced topics in film scholarship. Weekly screenings.

*Lehman; Sp; Y.***661 Lighting (5)**

Prereq: 563 or perm. Students taught to use lights to enhance and contribute to visual expression of film. Lighting theory, terms and elements of lighting, lighting instruments, and power supplies studied in lectures and field exercises. Emphasis on problems of lighting when using color film.

*Staff; 1 qtr every 2 yrs.***662 Cinematography (5)**

Prereq: 563 or perm. Intensive study of major aspects of cinematography including esthetics of camera, camera operation, support systems, lenses, filters, field maintenance, and repairs. Weekly lectures combined with workshop exercises simulating problems encountered in field.

*Staff; 1 qtr every 2 yrs.***663 Sound for Film Production (5)**

Prereq: 536 or perm. Audial elements of film including esthetics of sound, dialogue, sound effects, music, synchronization of sound and visual images, asynchronism, and multiple sound tracks. Workshops and lectures complement practical field exercises in effective use of current recording, re-recording, and mixing technology.

*Staff; 1 qtr every 2 yrs.***664 Editing (5)**

Prereq: 563 or perm. Examination of editor in relation to purpose of film, its intended mood and style, and its theme and subject. Through lectures accompanied by hands-on exercises, tools, practices, and esthetics of film editing and related post-production procedures intensely studied.

*Staff; 1 qtr every 2 yrs.***665 Producing (4)**

Prereq: 563 or perm. Administrative role of producer in financing, organization, and sales or distribution of film studied. Includes procedures for seeking and obtaining financial support, problems of scheduling and budgeting both narrative and documentary films, and producer's relationship to literary phases of production.

*Staff; 1 qtr every 2 yrs.***666 Directing (5)**

Prereq: 563 or perm. Role of director in script interpretation, performance direction, and camera technique. Emphasis on director's function in supervision of work necessary to achieve coherent, unified film production. Practical directing workshops combined with lectures to improve student's directing skills.

*Staff; 1 qtr every 2 yrs.***671 Film Topics Seminar (1-5)**

Prereq: perm. Investigation of selected motion picture topics announced in advance of registration. Orientation may be either scholarly, critical, or production workshop. Topics and credit hours vary qtr to qtr. Topics pursued in recent years were Animation, Laboratory Techniques, Image of Self in Film, Film and Dance, Film and Poetry, and Advanced Sync-Sound Production.

*Staff; F; Y.***672 Film Topics Seminar (1-5)**

Prereq: perm. See 671 for description.

*Staff; W; Y.***673 Film Topics Seminar (1-5)**

Prereq: perm. See 671 for description.

*Staff; Sp; Y.***682 Independent Study (1-15)**

Prereq: perm. Advanced individual creative or scholarly work in film. May be repeated.

*Prince; F, W, Sp, Su; Y.***780 Individual Production Problems (1-5)**

Prereq: perm. Preparation and production of a motion picture. Student must have skills necessary for completion of project. May be repeated.

*Prince; F, W, Sp, Su; Y.***781 Individual Readings (1-5)**

Prereq: perm. Readings in works related to motion pictures. Selections by student in consultation with faculty member.

*Prince, Lehman, Semsel; F, W, Sp, Su; Y.***895S Film Studio Thesis (1-10)**

2nd yr.

*Prince; F, W, Sp, Su; Y.***895W Film Written Thesis (1-10)**

2nd yr.

Lehman; F, W, Sp, Su; Y.

FOREIGN LANGUAGES AND LITERATURES

African, Asian, and Middle Eastern Languages

Arabic

Chinese

Indonesian/Malaysian

Swahili

Southeast Asian Literature in Translation

Germanic, Romance, and Slavic Languages

Modern Languages

(Professional Courses)

French

German

Italian

Russian

Spanish

Greek and Latin Languages

Greek

Latin

African, Asian, and Middle Eastern Languages

Arabic

571 Elementary Arabic I (3)

Study of spoken and written Arabic.

*Staff; F; Y.***572 Elementary Arabic II (3)**

Prereq: 571 or equiv. Study of spoken and written Arabic.

*Staff; W; Y.***573 Elementary Arabic III (3)**

Prereq: 572 or equiv. Study of spoken and written Arabic.

*Staff; Sp; Y.***574 Intermediate Arabic I (3)**

Prereq: 573 or equiv. Study of spoken and written Arabic.

Staff; F; Y.

575 Intermediate Arabic II (3)

Prereq: 574 or equiv. Study of spoken and written Arabic.
Staff; W; Y

576 Intermediate Arabic III (3)

Prereq: 575 or equiv. Study of spoken and written Arabic.
Staff; Sp; Y

Chinese**571 Elementary Chinese I (3)**

Study of spoken and written Mandarin.
Nybakken; F; Y

572 Elementary Chinese II (3)

Prereq: 571 or equiv. Study of spoken and written Mandarin.
Nybakken; W; Y

573 Elementary Chinese III (3)

Prereq: 572 or equiv. Study of spoken and written Mandarin.
Nybakken; Sp; Y

574 Intermediate Chinese I (3)

Prereq: 573 or equiv. Intensive study of spoken and written Mandarin.
Nybakken; F; Y

575 Intermediate Chinese II (3)

Prereq: 574 or equiv. Intensive study of spoken and written Mandarin.
Nybakken; W; Y

576 Intermediate Chinese III (3)

Prereq: 575 or equiv. Intensive study of spoken and written Mandarin.
Nybakken; Sp; Y

577 Advanced Chinese I (3)

Prereq: 576 or equiv. Intensive study of spoken and written Mandarin.
Nybakken; F; Y

578 Advanced Chinese II (3)

Prereq: 577 or equiv. Intensive study of spoken and written Mandarin.
Nybakken; W; Y

579 Advanced Chinese III (3)

Prereq: 578 or equiv. Intensive study of spoken and written Mandarin.
Nybakken; Sp; Y

Indonesian/Malaysian**571 Elementary Indonesian/Malaysian I (3)**

Study of spoken and written Indonesian/Malaysian.
McGinn; F; Y

572 Elementary Indonesian/Malaysian II (3)

Prereq: 571 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; W; Y

573 Elementary Indonesian/Malaysian III (3)

Prereq: 572 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; Sp; Y

574 Intermediate Indonesian/Malaysian I (3)

Prereq: 573 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; F; Y

575 Intermediate Indonesian/Malaysian II (3)

Prereq: 574 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; W; Y

576 Intermediate Indonesian/Malaysian III (3)

Prereq: 575 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; Sp; Y

577 Advanced Indonesian/Malaysian I (3)

Prereq: 576 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; F; Y

578 Advanced Indonesian/Malaysian II (3)

Prereq: 577 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; W; Y

579 Advanced Indonesian/Malaysian III (3)

Prereq: 578 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; Sp; Y

599 Special Studies (1-3)

Prereq: perm. Individual study of selected Southeast Asian topics.
McGinn; F; W; Sp; Su; Y

Swahili**571 Elementary Swahili I (3)**

Study of spoken and written Swahili.
Staff; F; Y

572 Elementary Swahili II (3)

Prereq: 571 or equiv. Study of spoken and written Swahili.
Staff; W; Y

573 Elementary Swahili III (3)

Prereq: 572 or equiv. Study of spoken and written Swahili.
Staff; Sp; Y

574 Intermediate Swahili I (3)

Prereq: 573 or equiv. Study of written and spoken Swahili.
Staff; F; Y

575 Intermediate Swahili II (3)

Prereq: 574 or equiv. Study of spoken and written Swahili.
Staff; W; Y

576 Intermediate Swahili III (3)

Prereq: 575 or equiv. Study of spoken and written Swahili.
Staff; Sp; Y

577 Advanced Swahili I (3)

Prereq: 576 or equiv. Study of spoken and written Swahili.
Staff; F; Y

578 Advanced Swahili II (3)

Prereq: 577 or equiv. Study of spoken and written Swahili.
Staff; W; Y

579 Advanced Swahili III (3)

Prereq: 578 or equiv. Study of spoken and written Swahili.
Staff; Sp; Y

Southeast Asian Literature in Translation**540 Traditional Literature of Southeast Asia (5)**

Survey of traditional literature of Southeast Asia in translation.
McGinn; W; Y

545 Modern Literature of Southeast Asia (5)

Survey of modern literature of Southeast Asia in translation.
McGinn; Sp; Y

Germanic, Romance, and Slavic Languages**MODERN LANGUAGES**

Master of arts programs are offered in French, German, and Spanish. Both a master's program with thesis and a nonthesis program are available. Courses for a secondary area can be taken in any language offered by the Modern Languages Department. Within the Spanish M.A. program, one of three options may be chosen by the candidate: Hispanic Literature, Pedagogy, or General Hispanic Studies. Qualified students may apply for admission to a graduate degree program in modern languages in any quarter. Application materials must be received one quarter prior to the quarter for which the student seeks admission. Applicants wishing to be considered for financial aid for the following academic year must submit application materials by March 1. Students are urged to travel and study abroad, especially during the summer. Quali-

fied teaching assistants may have an opportunity to teach on one of the department's four programs abroad.

A student may also earn a master of education with certification and a major in one modern foreign language, or a Ph.D. in education with 11 graduate courses in one modern foreign language. Students interested in these programs should consult with the College of Education for further information.

To begin a graduate major in a modern foreign language, the student should have completed an undergraduate major of 36 quarter hours beyond course 213 or the equivalent in that language. To begin work in a secondary area of modern languages, the student should have completed a minimum of six hours of undergraduate work at the 300 level or the equivalent in the language. Deficiencies in undergraduate preparation can be made up during the summer quarter preceding graduate work or during the first quarter of study.

At least eleven graduate courses in the major field are required for the M.A. degree. The student must also demonstrate a reading knowledge of a second modern language or Latin, to be shown either by passing 213 in a modern foreign language, Latin 213 or equivalent intermediate course with at least a grade of B; passing the examination given for 613 (ETS Foreign Language Tests or a translation test prepared by the Modern Languages Department); or by passing a literature course in the foreign language. In lieu of a foreign language, a student may present two courses in linguistics which are to be in addition to the 11 graduate courses required for the M.A. degree. Teaching associates are required to register for one hour of 699 each of the first three quarters they are on financial appointment. The student must pass a written and an oral comprehensive examination, based on coursework and a reading list.

For further information regarding admissions, program options and degree requirements write to the Graduate Chairperson, Department of Modern Languages, Ellis Hall, Ohio University, Athens, Ohio 45701.

Modern Languages (Professional Courses)

510 Supervised Practice and Research in Language Laboratory (4)

For graduate students in teaching English as a foreign language, modern foreign language graduate assistants, graduate teaching assistants in linguistics, graduate education students, and teachers in secondary schools and colleges.

545 Teaching of Modern Foreign Languages (4)

Problems confronting students on level of instruction (elementary school, secondary school, college) at which they teach or plan to teach.

French

515 French Literature of the Renaissance (5)

Significant works of major 16th century writers: Marot, Rabelais, the Pleiade poets, Montaigne, and others.

516 French Literature of the Renaissance (5)

Continuation of 515. See 515 for description.

518 17th Century French Literature (5)

Works by numerous authors, including at least some of the following: Descartes, Pascal, Mme de La Fayette, La Rochefoucauld, La Bruyere, La Fontaine, and Boileau.

519 17th Century French Literature (5)

Major plays of Corneille, Racine, and Moliere.

521 Old French Language and Literature (5)

Language and literature of northern France and England in Middle Ages, especially 12th and 13th centuries. Elementary knowledge of Latin and German recommended.

522 Old French Language and Literature (5)

Continuation of 521. See 521 for description.

523 18th Century (5)

French literature and thought in Age of Enlightenment: Montesquieu, Voltaire, Rousseau, Diderot, Marivaux, Beaumarchais.

524 18th Century (5)

Continuation of 523. See 523 for description.

525 Romanticism (5)

Development of Romantic movement in France, as exemplified in drama, poetry, and fiction of 1st half of 19th century.

526 Realism and Naturalism (5)

Representative works of Balzac, Stendhal, Flaubert, Zola and Becque.

527 French Poetry in the Second Half of the 19th Century (5)

Poetry of Baudelaire, Verlaine, Rimbaud, Mallarmé, and others
Danner

529 20th Century French Literature (5)

French literature before WW II.

531 20th Century French Literature (5)

Novel, drama, and poetry in France since WW II.

533 20th Century French Literature (5)

Study in depth of genre, theme, work, or major figure of 20th century.

537 Applied Phonetics (4)

Advanced study of International Phonetic Alphabet and transcription practice in French.

539 Modern French Usage (4)

Fine points of grammar. Practice in composition and analysis of texts.

541 Stylistics (4)

Composition. *Explication de texte*. Translation of English into French. Study of French prosody.

557 History of the French Language (5)

Phonology, morphology, and syntax of Old French; survey of evolution of French from its origin to present; reading of illustrative texts. Elementary knowledge of Latin recommended.

559 French Civilization and Culture (5)

Prereq: grad rank. Social, political, and cultural development of France from its origins to French Revolution.

560 French Civilization and Culture (5)

Prereq: grad rank. Social, political, and cultural development of France from French Revolution to present.

561 Graduate Study in France (as recommended by dept)

Prereq: perm. Research project must be approved by graduate committee. Research paper must be presented to graduate committee by end of qtr following foreign study.

562 Graduate Study in France (as recommended by dept)

Prereq: perm. Continuation of 561. See 561 for description.

563 Graduate Study in France (as recommended by dept)

Prereq: perm. Continuation of 561 and 562. See 561 for description.

602 Seminar (5, max 10)

Advanced study of period, movement, genre, work, or author in 1 of the following areas: (a) Medieval (b) Renaissance (c) 17th century (d) 18th century (e) 19th century (f) 20th century. May be repeated when topic is changed.

603 Seminar (5, max 10)

Continuation of 602. See 602 for description.

611 French for Graduate Reading Requirement (3-5)

Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (*Credit does not count toward degree.*)

612 French for Graduate Reading Requirement (3-5)

Continuation of 611. See 611 for description.

613 French for Graduate Reading Requirement (3-5)

Continuation of 611 and 612. See 611 for description.

695 Theses (as recommended by dept)

Prereq: perm.

698 Independent Study in French (1-4, max 4)

Prereq: perm. Normally, final grade is recorded when departmental major examination has been passed.

699 Problems in Teaching College French (1, max 3)

Designed to provide guidance for teaching associates in 1st yr of instructing college students in beginning language course. Methods of presentation and difficulties in grammar and syntax discussed. Skill of making valid and fair tests developed.

German

525 Studies in 19th Century German Literature (5)

526 Studies in 19th Century German Literature (5)

Continuation of 525.

527 Studies in 19th Century German Literature (5)
Continuation of 525 and 526.

529 Studies in 20th Century German Literature (5)

530 Studies in 20th Century German Literature (5)
Continuation of 529.

531 Studies in 20th Century German Literature (5)
Continuation of 529 and 530.

533 German Lyric Poetry (5)

Interpretative and critical study of German lyric poetry.

537 Phonology (4)

Analytical description of sound system of modern German.

539 Grammatical Structure (4)

Structure of German language with emphasis on contrastive syntax of English and German.

541 Stylistics (4)

Practice in writing expository prose and analysis of style.

553 Studies in 18th Century German Literature (5)
Major works of Lessing, Schiller, and Goethe.

554 Studies in 18th Century German Literature (5)
Continuation of 553. See 553 for description.

555 Studies in 18th Century German Literature (5)
Continuation of 553 and 554. See 553 for description.

559 German Culture and Civilization (5)

Prereq: grad rank. Cultural and political development of Germany from its beginning to demise of Holy Roman Empire of German Nation.

560 German Culture and Civilization (5)

Prereq: grad rank. Cultural and political development of Germany in 19th and 20th centuries.

561 Graduate Study in Germany, Austria or Switzerland (as recommended by dept)

Prereq: perm. Research project must be approved in advance.

562 Graduate Study in Germany, Austria or Switzerland (as recommended by dept)

Prereq: perm. continuation of 561. See 561 for description.

563 Graduate Study in Germany, Austria or Switzerland (as recommended by dept)

Prereq: perm. Continuation of 561 and 562. See 561 for description.

602 Seminar (5, max 10)

Topics to be announced. Students may repeat seminar as often as subject changes, up to maximum of 10 credit hrs.

603 Seminar (5, max 10)

Continuation of 602. See 602 for description.

611 German for Graduate Reading Requirement (3-5)

Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (*Credit does not count toward degree.*)

612 German for Graduate Reading Requirement (3-5)

Continuation of 611. See 611 for description.

613 German for Graduate Reading Requirement (3-5)

Continuation of 611 and 612. See 611 for description.

695 Thesis (as recommended by dept)

Prereq: perm.

698 Independent Study In German (1-4, max 4)

Prereq: perm. Normally, final grade is recorded when departmental major examination has been passed.

699 Problems In Teaching College German (1, max 3)

Designed to provide guidance for teaching associates in 1st yr of instructing college students in beginning language course. Methods of presentation and difficulties in grammar and syntax discussed. Skill of making valid and fair tests developed.

Italian

561 Graduate Study In Italy (as recommended by dept)

Prereq: perm. For study either in Ohio University's Summer Program in Italy or at accredited Italian university during academic yr. Highly qualified student may go to Italy to complete research for graduate paper. Paper must be presented to departmental graduate committee by end of qtr following study in Italy.

562 Graduate Study In Italy (as recommended by dept)

Prereq: perm. Continuation of 561. See 561 for description.

563 Graduate Study in Italy (as recommended by dept)

Prereq: perm. Continuation of 561 and 562. See 561 for description.

611 Italian for Graduate Reading Requirement (3-5)

Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (*Credit does not count toward degree.*)

612 Italian for Graduate Reading Requirement (3-5)

Continuation of 611. See 611 for description.

613 Italian for Graduate Reading Requirement (3-5)

Continuation of 611 and 612. See 611 for description.

Russian

611 Russian for Graduate Reading Requirement (3-5)

Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (*Credit does not count toward degree.*)

612 Russian for Graduate Reading Requirement (3-5)

Continuation of 611. See 611 for description.

613 Russian for Graduate Reading Requirement (3-5)

Continuation of 611 and 612. See 611 for description.

698 Independent Study in Russian (1-4, max 4)

Prereq: perm. For students who have established superior records and who have exceptional or native fluency in Russian.

Spanish

521 Old Spanish Language and Literature (5)

Phonology, morphology, and syntax of Old Spanish. Reading from *Cantar de Mio Cid*, Gonzalo de Berceo, Juan Ruiz, and other works. Knowledge of Latin recommended.

522 Old Spanish Language and Literature (5)

Continuation of 521. See 521 for description.

525 19th Century Spanish Literature (1800-1850) (5)

Romanticism, *costumbrismo*, and other trends in drama, essay, and poetry. Works by the Duque de Rivas, Espronceda, Larra, Zorrilla, and others.

527 19th Century Spanish Literature (1850-1900) (5)

Regionalism and naturalism in novel. Works by Fernán Caballero, Valera, Pereda, Blasco Ibáñez, Pérez Galdós, and others.

529 Generation of '98 (5)

Representative works by Arozín, Bajora, Machado, Unamuno, Valle-Inclán, and others.

532 20th Century Spanish Literature (5)

Poetry, drama, and novel in Spain since 1925.

537 Applied Phonetics (4)

Systematic description of segmental and prosodic elements of Spanish system, particularly as contrasted with English.

539 Modern Spanish Usage (4)

Syntactical and grammatical structure.

541 Stylistics (4)

Techniques used to acquire correct style in written Spanish.

543 Spanish American Literature (5)

Main currents of Spanish American literature from colonial period through *Modernismo*.

544 Spanish American Literature (5)

Continuation of 543. See 543 for description.

547 Themes from Spanish American Prose (5)

Social and literary significance of novels written from 1910 to present.

548 Contemporary Spanish American Literature (5)

Principal authors and literary movements of post-modernism.

553 Drama of the Golden Age (5)

Works by Lope de Vega, Tirso de Molina, Juan Ruiz de Alarcón, Calderón, and related dramatists.

555 Novel of the Golden Age (5)

Picaresque novel, Cervantes' *novelas ejemplares*, and other trends in novel of 16th and 17th centuries.

557 History of the Spanish Language (5)

Evolution of Spanish language from pre-Romance Iberian languages to present. Consideration of contemporary dialects.

558 Don Quixote de la Mancha (5)

Intensive study of Part One and Part Two of Spain's greatest novel. Biographical material concerning Miguel de Cervantes, author of the *Quijote*.

559 Spanish Civilization and Culture (5)

Prereq: grad rank. Comprehensive survey of Spanish civilization and culture including setting, historical background, regionalism, intellectual currents, and movements in arts which lead into and form modern Spain.

560 Spanish American Civilization and Culture (5)

Prereq: grad rank. Reading and interpretation of Spanish American philosophical, political, historical, social, and artistic thought as expressed in essay. Occasional visits of lecturers from other disciplines will provide different perspectives on same subject and thus crossfertilization of ideas.

561 Graduate Study in Spain or Latin America (as recommended by dept)

Prereq: perm. Research project must be approved by graduate committee. Research paper must be presented to graduate committee by end of qtr following foreign study.

562 Graduate Study in Spain or Latin America (as recommended by dept)

Prereq: perm. Continuation of 561. See 561 for description.

563 Graduate Study in Spain or Latin America (as recommended by dept)

Prereq: perm. Continuation of 561 and 562. See 561 for description.

602 Seminar (5, max 10)

Advanced study of period, genre, work or author in 1 of the following areas: (a) literature of the Middle Ages, (b) Renaissance, (c) modern Spanish literature, (d) Latin American literature. (May be repeated when topic is changed.)

603 Seminar (5, max 10)

Continuation of 602. See 602 for description.

611 Spanish for Graduate Reading Requirement (3-5)

Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (*Credit does not count toward degree.*)

612 Spanish for Graduate Reading Requirement (3-5)

Continuation of 611. See 611 for description.

613 Spanish for Graduate Reading Requirement (3-5)

Continuation of 611 and 612. See 611 for description.

695 Thesis (as recommended by dept)**698 Independent Study in Spanish (1-4, max 4)**

Prereq: perm. Normally, final grade is recorded when departmental major examination has been passed.

699 Problems in Teaching College Spanish (1, max 3)

Designed to provide guidance for teaching associates in 1st yr of instructing college students in beginning language course. Methods of presentation and difficulties in grammar and syntax discussed. Skill of making valid and fair tests developed.

Greek and Latin Languages

Greek

No graduate program in Greek is offered.

Latin

(Secondary area only)

The prerequisite for a graduate minor in Latin is 18 hours of Latin above two high school units.

501 Studies in Roman Life (3)

Prereq: perm. Specialized study of selected topics.

511 Studies in Latin Literature of the Republic (3)

Extensive reading or study of special topics in period.

512 Studies in Latin Literature of the Republic (3)

Continuation of 511. See 511 for description.

513 Studies in Latin Literature of the Republic (3)

Continuation of 511 and 512. See 511 for description.

515 Studies in Latin Literature of the Early Empire (3)

Extensive reading or study of special topics in period.

516 Studies in Latin Literature of the Early Empire (3)

Continuation of 515. See 515 for description.

517 Studies in Latin Literature of the Early Empire (3)

Continuation of 515 and 516. See 515 for description.

519 Graduate Reading in Latin Literature (3)

Reading and essays to complement undergraduate work in Latin.

520 Graduate Reading in Latin Literature (3)

Continuation of 519. See 519 for description.

521 Graduate Reading in Latin Literature (3)

Continuation of 519 and 520. See 519 for description.

533 Special Work in Latin Syntax (3)

Development of style in writing Latin prose.

540 Special Problems in Latin (2-6, max 12)

Investigation of selected phases of classical study.

601 Latin for Graduate Reading Requirement (4)

Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (*Credit does not count toward degree.*)

602 Latin for Graduate Reading Requirement (4)

Continuation of 601. See 601 for description.

603 Latin for Graduate Reading Requirement (4)

Continuation of 601 and 602. See 601 for description.

FRENCH

(See Foreign Languages and Literatures)

GEOGRAPHY

The Department of Geography offers both the thesis and non-thesis M.A. degree tracks. Applicants must submit transcripts of all undergraduate work, the aptitude portion of the G.R.E., and three letters of recommendation for evaluation by the graduate committee. Several teaching and research associateships and scholarships are awarded each year. Applicants wishing to be considered for financial support for the academic year beginning in September should submit all application materials prior to March 1. Application deadlines for admission to the graduate program are one month prior to the quarter for which admission is required. All financial support is allotted on a competitive basis, and most is committed in the fall. Occasionally, however, associate or scholarship support is available for students wishing to begin study during winter, spring, or summer quarter.

Geography courses which are required for both the thesis and nonthesis tracks are GEOG 570 (Geographic Thought), GEOG 577 (Quantitative Methods), GEOG 675 (Research Methods), and at least two seminars in geography.

Students pursuing the thesis track must take a minimum of nine courses, seven of which must be in geography. Hours in 513, 514, 585, and 690 are excluded from the count. Fifteen additional hours in thesis are also required. The thesis committee is made up of three faculty members from the Department of Geography (one of whom will serve as the student's advisor and thesis director), and one additional committee member may be chosen from a related discipline. Candidates for the thesis degree must successfully defend both the thesis proposal and the completed thesis before this committee.

Students selecting the nonthesis track must complete a minimum of 60 quarter hours of graduate study, 50 of which must be in geography. Hours in 513, 514, 585, and 690 are excluded from the count. The nonthesis student must develop a program of study with two of the following areas of systematic emphasis: area studies, cultural, physical, resource management, population, and urban. These systematic concentrations must be supported by at least two courses taken in one of the following techniques: cartography, remote sensing, and quantitative methods. The program of study must be approved by a committee made up of three geogra-

phy faculty members. The degree is completed by passing a three-part comprehensive written exam on the chosen areas of systematic and technique emphases.

501 Advanced Physical Geography (5)

Application of physical geographic principles to specific research problems.

Isaac; Sp; Y

511 Elements of Meteorology (5)

General survey of physical principles of weather.

Isaac; F; Sp; Y

512 Climate (5)

Exchanges of energy and moisture and their significance in man's utilization of earth's surface.

Isaac; W; Y

513 Observations in Meteorology (2)

Prereq: 511, 512. Lab experience in acquisition and measurement of meteorological parameters.

514 Practicum in Meteorological Forecasting (2-10)

Prereq: 511, 512. Lab experience in preparation and dissemination of meteorological forecasts.

520 Land Use Planning (5)

Land use controls in U.S. Zoning ordinance, subdivision regulation, social concerns, managed growth, land banking, homesteading, historic preservation.

Cobban

521 Environmental Planning (5)

Planning in built and natural environments briefly surveying personal space, architectural space, small towns, and neighborhoods and emphasizing larger conceptual regions and nation.

522 Population Geography (5)

Systematic survey of world population problems including distribution, composition, fertility, mortality, density, age-sex structure, and impact of these on world population growth and resources.

Williams; Bain; F; Su; Y

525 Systematic Political Geography (5)

Systematic examination of basic approaches, topics, and spatial concepts in political geography, with case studies. Emphasis at nation-state level.

Walter; W; Y

526 American Conservation Movement (5)

Topical survey of schools of thought, themes, and specific issues in American conservation in past century. 19th century transcendental thinkers are baseline for survey. Contemporary environmental issues and debates provide capstone for course.

Bernard

527 Resource Management (5)

Themes in American environmental history, contemporary environmentalism, methods of resource assessment and management, and selected case studies in managing renewable resources.

Bernard; W; Y

529 Settlement Geography (5)

Patterns and forms of rural settlement in terms of environmental, functional, and traditional effects.

Wilhelm; Sp

530 Industrial Location (5)

Factors in industrial location, theory, and applications in development planning.

Bain

531 Geography of Agricultural Activity (5)

Agriculture examined from 4 viewpoints: evolution of agricultural systems; ecological analysis of traditional and modern agriculture; food and agricultural development (Third World Emphasis); and problems and prospects in North American agriculture.

Bernard

535 Evolution of Planning (5)

Evolution of urban planning in U.S. during 19th and 20th centuries. Housing, parks, ideal communities, intellectual attitudes, zoning and subdivision case law, federal intervention, and present programs.

Cobban

540 Geography of Western Europe (5)

Topical and regional survey of western Europe with emphasis on region's position as integrated economic area. Specific European planning regions will form basis for discussion.

Wilhelm; W; A

543 Geography of Appalachia (5)

Topical and regional survey of Appalachia with emphasis on settlement and rural and urban land use. National role of Appalachia assessed, especially in regard to coal, conservation, reclamation, and recreation.

Wilhelm; W; Y

545 Contemporary Southeast Asia (5)

Survey of population, food production, natural resource exploitation, energy, physical environment, and regional concept in Southeast Asia.

Cobban; F

551 African Thematic Geography (5)

Systematic examination of 4 selected themes relevant to modern geography of Africa. Emphasis on development.

Bernard; Walter; F; Y

552 Africa: Regional Approaches (5)

Regional survey of the 4 major areas of tropical Africa: East, West, Equatorial, Central and South.

Bernard; Walter; W; Y

555 Geography of Latin America (5)

Regional survey of Latin America with emphasis on problems of social and economic development.

Williams; W

560 Map Making (5)

Introduction to basic design principles of esthetically pleasing maps, emphasizing legibility and readability from map user's viewpoint. Map construction ranges from simple map compilation to multicolor composition and scale reduction.

Bloemer; F; Y

561 Statistical Cartography (5)

Cartography techniques of representing quantitative data on maps.

Bloemer; W; Y

562 Advanced Cartography (5)

Computer-aided cartography for quantitative data; culminating in application of cal-comp plotter.

Bloemer; Sp; Y

565 Air-Photo Interpretation (5)

Principles and techniques used in air-photo interpretation for geographers, geologists, military, community planners, and engineers.

Bloemer; Sp; Y

570 Development of Geographic Thought (5)

Philosophical examination of evolution of geography as an academic discipline; historical theme covers major traditions, ideas, concepts, trends, controversies, and prominent geographers within field.

Walter; Cobban; Sp; Y

577 Quantitative Methods (5)

Systematic survey of quantitative techniques employed by geographers.

Isaac; F; Y

580 Remote Sensing (5)

Prereq: 565, GEOL 507. Synoptic analysis in both visual and digital form of spatial variations in botanical, geological, and geographical phenomena.

Bloemer; Sp

585 Internship (max 15)

Provides qualifying students credit for work-study experience in cartography, remote sensing, land-use planning, resource management, and other field in applied geography. Supervised by geography faculty and evaluated by on-the-job supervisor. Lengthy report summarizes experience.

Staff

594 Field Problems (5)

Prereq: Geography major or perm. Fieldwork in Belize, involving 2-wk field trip in March followed by coursework in spring qtr. Surveying of tropical forest, savanna, and reef environments; local cultures; and archaeological sites. Research on field problem using standard geographical field methods.

Walter; Williams; Sp

666 Seminar in Cartography (5)

Bloemer

675 Library Research and Writing (5)

Emphasis on geographic research and writing. Consideration of geography as science and scientific method. After studying tech-

niques and style, student completes a number of writing tasks including literature reviews, criticism, and research proposal.

F; Y.

676 Field Methods (5-9)

Introduction to geographic field methods and techniques in rural and/or urban areas, involving field mapping and recording, spatial sampling, interviewing, coding and visual recording, field analysis, and reporting and summarizing.

Staff; Su; D.

678 Analysis of Geographical Data (5)

Prereq: 577. Students build geographical data file; analyze with descriptive and inferential statistics; use models of spatial analysis; learn CMS, languages, and packages; all directed toward description and analysis of spatial patterns.

Williams; Sp.

679 Seminar: Human Geography (5)

Staff.

680 Seminar: Contemporary Third World Problems (5)

Cobban.

681 Seminar In Physical Geography (5)

Isaac.

682 Seminar In Economic Geography (5)

Bain.

682B Seminar in Political Geography (5)

Walter.

683 Metropolitan Areas; Seminar in Urban Geography (5)

Bain.

684A Seminar In Regional Geography: Latin America (5)

Williams.

684B Seminar in Regional Geography: Southeast Asia (5)

Cobban.

684C Seminar in Regional Geography: Africa (5)

Bernard, Walter; Sp; Y.

685 Seminar in Population Geography (5)

Bain or Williams

686 Seminar in Historical Geography (5)

Wilhelm.

687 Seminar in Geographical Techniques (5)

Staff.

688 Seminar in Resource Management (5)

Bernard

689 Seminar in Land Use Planning (5)

Cobban or Bain.

690 Geographic Studies (1-5, max 5)

Prereq: perm.

Staff.

695 Thesis (1-15)

Staff; F, W, Sp, Su; Y.

GEOLOGICAL SCIENCES

The master of science degree is offered in the following fields of geology: environmental geology, geomorphology, geophysics, glacial geology, hydrogeology, micropaleontology, paleontology, sedimentary petrology, sedimentology, stratigraphy, structural geology, and tectonics.

Graduate students with undergraduate majors in physics, mathematics, biology, chemistry, civil engineering, or geology may study for the M.S. degree in special programs in hydrogeology and geophysics. The master of science degree in environmental science is available through an interdepartmental program administered by the College of Arts and Sciences.

Students wishing to pursue a graduate degree in geology must have completed undergraduate coursework in each of the following areas: crystallography, mineralogy, igneous and metamorphic petrology, geomorphology, paleontology, sedimentology, stratigraphy, structural geology, and historical geology. In addition, the prospective graduate candidate must have completed the equivalent of three quarters each of chemistry, physics, and mathematics through integral calculus. Students unable to meet the above requirements will be notified of course deficiencies at the time of

their acceptance for graduate study. Deficiencies will be made up without graduate credit during the first year of residence. The minimum acceptable grade for making up geology core course deficiencies is B and the minimum for nongeology deficiencies is C. A recognized summer field course is also required of all incoming graduate students. This course may be taken for graduate credit, but will not be counted toward fulfillment of the M.S. degree requirements.

The department offers a thesis or a nonthesis master's degree option. Thesis option students must have selected a permanent advisor and submit a preliminary thesis proposal by the end of the first year of residence and must take GEOL 501 plus seven additional approved courses. The nonthesis option is open only to those students in good academic standing and not on graduate contract appointment or tuition scholarship. Nonthesis option students must take GEOL 501 and 11 additional approved courses and complete a master's project in lieu of a formal thesis.

GEOL 501 is team taught by the graduate faculty with the express purpose of determining whether the student is capable of pursuing a master's degree in geology at Ohio University. Failure to attain a grade of CR in the course will either result in outright dismissal from the program or, if the grade is clearly the result of previously undetected deficiency in one or two subdisciplines of geology, remedial coursework in those areas.

Graduate students holding graduate teaching associateships must teach laboratory sections on a part-time basis. Applications for admission to graduate study in geology are accepted during all quarters. Applications for financial aid must be received by the department prior to February 15 of the academic year preceding the year of intended entry into the graduate program.

501 Advanced Physical Geology (5)

Team-taught course offered by geology faculty to all incoming geology grad students that reviews basics of geology and serves as placement tool for those students.

Staff; F; Y.

505 Introduction to Air Photo and Map Interpretation (2)

Prereq: 530, 560 or perm. Principles of use of topographic maps and aerial photographs for study and interpretation of geologic and geomorphic features. 1 lec, 2 lab.

Smith.

507 Geological Applications of Remote Sensing (5)

Prereq: 305, 330, 360, or perm. Principles of interpretation and analysis of conventional aerial photograph and satellite imagery in resolution of geologic problems. 2 lec, 4 lab.

Smith; W; Y.

510 Rocks and Minerals (5)

Prereq: 101. Principles of crystallography and crystal chemistry; descriptive mineralogy; origin and classification of igneous sedimentary and metamorphic rocks. Can be taken for graduate credit only by students in hydrogeology and geophysics options whose undergraduate degree is not in geology. 3 lec, 4 lab.

Heien; W; Y.

513 Optical Mineralogy (6)

Prereq: 315. Optical characteristics of minerals in polarized light; identification of minerals with petrographic microscope.

Heien; F; Y.

522 Igneous and Metamorphic Petrology (5)

Prereq: 513. Petrogenesis of igneous and metamorphic rocks and their description and classification in hand specimen and thin section. 3 lec, 4 lab.

Heien, Nance; W; Y.

524 Sedimentary Petrology (4)

Prereq: 513, 550. Study of sedimentary textures to interpret depositional mechanisms and environments and evaluate diagenetic history. 3 lec, 2 lab.

Socci; Sp; Y.

526 Principles of Geochemistry (5)

Prereq: perm. Low-temperature solution geochemistry and equilibrium (including sea water); Eh-pH relationships; applications of thermodynamics to geologic systems; introduction to isotope geochemistry. 4 lec.

Heien; Sp; A; 1980.

530 Principles of Geomorphology (5)

Prereq: 101. Basic concepts of origin and development of land forms. Laboratory study of topographic maps and aerial photographs. Can be taken for graduate credit by students in hydrogeology and geophysics options only. 4 lec, 2 lab.

Smith; W; Y.

531 Regional Geomorphology of North America (5)

Prereq: 256, 330, or perm. General consideration of nature and origin of land forms of North America, emphasizing regional approach to study of land forms. 4 lec.

Smith; Sp; A; 1979.

532 Origin and Classification of Soils (5)

Prereq: perm. Concept of soil and factors of soil formation; introduction to soil morphology and systems of soil classification; discussion of major soil groups of world and soils of Ohio. 3 lec, 2 lab, field work.

Smith; Sp; A; 1980.

538 Glacial Geology (5)

Prereq: perm. Formation and behavior of glaciers, past and present; glacial processes and causes and implications of ice ages. 3 lec, 2 lab, field trips.

Smith; F; Y.

543 Advanced Invertebrate Paleontology (6)

Prereq: 340. Evolutionary trends, geologic history, selected index genera and faunas, and modern methods in study of invertebrate fossils. 3 lec, 4 lab, field work.

Mapes; W; Y.

546 Principles of Micropaleontology (5)

Prereq: 256, 350, 413. Biology, morphology, taxonomic characteristics, and uses of microscopic fossils. 2 lec, 4 lab.

Worsley; Mapes; F; Y.

548 Principles of Paleocology (5)

Prereq: perm. Principles involved in reconstruction of paleoenvironments.

Mapes; Worsley; Sp; A.

550 Stratigraphy - Sedimentology (4)

Prereq: 256, 510. Introduction to principles and processes relating to origin of stratified rocks and conventions of their classification and description. Field methods and field trips with emphasis on depositional environments. Can be taken for graduate credit only by students in hydrogeology and geophysics options.

Socci; Sp; Y.

554 Marine Geology (5)

Prereq: 211, 256, 350, 462. Evolution of deep-sea crustal and sedimentary record in terms of plate tectonics.

Worsley; W; Y.

560 Structural Geology (4)

Prereq: perm. Principles of rock deformation and interpretation of folding and faulting and related topics. Field-oriented structural problems, structural maps and use of stereographic projections. Can be taken for graduate credit only by students in hydrogeology and geophysics options. 3 lec, 2 lab, field work.

Nance; F; Y.

561 Advanced Structural Geology (5)

Prereq: perm. Stress and strain; their application and derivation in natural structures. Regional structural associations and geometric analysis. 3 lec, 2 lab, field work.

Nance; W; Y.

562 Geodynamics: The Earth's Interior (4)

Prereq: 101; PHYS 201, or perm. Structure of earth's interior and plate tectonics. Solid earth geophysics; gravity, magnetism, heat flow, velocity structure and seismicity. 4 lec.

Ramana; Nance; W; Y.

564 Regional Tectonics (5)

Prereq: B.S. in science or engineering or perm. Global tectonics and structure of continental cratons and margins, mid-ocean ridges, island arcs and major orogenic belts. 4 lec.

Nance; Sp; A.

570 Economic Geology (5)

Prereq: perm. Principles of mineral deposition and characteristics of metallic and nonmetallic mineral deposits.

Heien

575 Petroleum Geology (5)

Prereq: perm. Origin, migration, and accumulation of petroleum and survey of major oil basins of world. 3 lec, 2 lab.

Fisher; F; Y.

576 Subsurface Methods (5)

Prereq: perm. Drilling practices, electric, sonic, and radioactivity logging, applied to subsurface exploration. 3 lec, 2 lab.

Ahmad; W; Y.

580 Hydrogeology I (5)

Prereq: perm. Principles governing occurrence, movement, and recovery of water in soil and aquifers, water budget, water pollution, water chemistry. 3 lec, 2 lab.

Ahmad; F; Y.

581 Hydrogeology II (5)

Prereq: perm. Design of well construction and well fields. Pumping tests, interference. Study of groundwater basins. 3 lec, 2 lab.

Ahmad; W; Y.

582 Theory of Groundwater Motion (5)

Prereq: perm. Basic principles and fundamental equations; D.E. of groundwater motion, solution of boundary value problems for different types of aquifer. Analytical and numerical methods in subsurface hydrology with emphasis on finite difference method; digital model. 4 lec.

Ahmad; Sp; Y.

583 Field Hydrology (6)

Prereq: water resources background. Field training in techniques of hydrology and water resources evaluation.

Ahmad; Su; Y.

585 Exploration Geophysics (5)

Prereq: perm. Introductory course in geophysical exploration methods as practiced in petroleum industry. Emphasis on seismic methods especially CDP reflection; gravity and magnetic methods also covered. 3 lec, 2 lab.

Ramana; F; Y.

587 Summer Field Geology (9)

Prereq: perm. (8 wks, summer). Geologic mapping in deformed sedimentary, igneous, and metamorphic terranes to include use of Brunton compass, hand level, and air photos. Written field report required. Course conducted in Nevada.

Staff; Su; Y.

588 Geologic Field Reconnaissance (2-3)

Prereq: perm. Vacation period geologic field trips to selected areas in North America with pertinent conferences, readings, and reports.

Staff; W; D.

656 Clastic Sedimentology (5)

Prereq: 520 or perm. Sedimentology of terrigenous clastic depositional systems with emphasis on physical, chemical, and biological depositional processes; field projects, field trips.

Socci.

686 Seismic Interpretation (5)

Prereq: 585. Structural interpretation of seismic CDP and migrated sections. Stratigraphic interpretation of specially processed seismic sections. Integration of geologic information well-log data and stacking velocities in seismic interpretation. Importance of seismic, gravity, and magnetic surveys to basin analysis. 2 lec, 4 lab.

Ramana; W; Y.

687 Geophysical Data Processing (5)

Prereq: EE 310, EE 513, or perm. Linear systems analysis, Fourier transforms, Laplace transforms and z transforms and their applications to geophysical data processing. Emphasis on seismic data processing as practiced in petroleum industry; spiking deconvolution, predictive deconvolution; advanced processing of seismic data. 3 lec, 2 lab.

Ramana; Sp; Y.

690 Advanced Seminar in Geology (1-2)

Prereq: perm. Intensive study of selected geologic topics by special groups. (Several seminars may be held concurrently.)

Staff; F, W, Sp, Su; Y.

691 Geologic Studies (1-6, max 12)

Prereq: perm. Individual or small group independent study arranged with faculty members.

Staff; F, W, Sp, Su, Y.

693 Research in Geology (1-3, max 6)

Staff; F, W, Sp, Su, Y.

695 Thesis (1-15)

Staff; F, W, Sp, Su, Y.

GERMAN

(See Foreign Languages and Literatures)

GOVERNMENT

(See Political Science)

GREEK

(See Foreign Languages and Literatures)

HEALTH AND HUMAN SERVICES

(See Health and Sport Sciences; Health Services Administration; Hearing and Speech Sciences; and Home Economics)

HEALTH AND SPORT SCIENCES

Programs leading to the degrees master of science in physical education, master of science in physiology of exercise, master's in sports administration, and master's of health services administration* are offered by the School of Health and Sport Sciences. Within the program leading to the master of science in physical education, the student has the opportunity to develop a concentration in athletic administration, athletic training, recreation studies, master teacher of physical education, foundations of coaching, international sport studies, administration of physical education, or psycho-social interpretation of sport and physical activity.

The student enrolled in the M.S.P.E. program may elect to follow one of three options in planning a graduate program of study. PLAN A requires the completion of 39 quarter hours of coursework plus a six-hour thesis. An oral defense of the thesis will be required. PLAN B requires the student to complete 44 hours of coursework plus a six-quarter-hour research paper. PLAN C requires the completion of 50 quarter hours of coursework.

The master's degree student in physical education must complete a minimum of 36 hours in the School of Health and Sport Sciences. For admission a student must have a bachelor's degree from an accredited institution with 36 quarter hours of appropriate undergraduate coursework. Students enrolled in the physiology of exercise master's program must take 44 hours of required coursework plus a six-hour thesis.

For the student in sports administration an undergraduate major in communications, business administration, journalism, or physical education is desirable but not mandatory. Each student in cooperation with an advisor plans an academic program based on his or her career objectives and interests. The approach may be interdisciplinary and is planned specifically by and for the student. Only two courses are required: HSAD 507 and HSAD 691. In addition to the coursework, a minimum 11-week internship must be completed with a sports-related agency.

Depending on the academic record, an applicant for the graduate physical education and physiology of exercise programs may be requested to submit scores on the Miller Analogies Test or the Graduate Record Examination prior to admission. All sports administration applicants will be required to submit test scores from the Miller Analogies Test or Graduate Record Examination prior to admission. In addition, the application must be accompanied by a two-page autobiography.

Admission to the graduate physical education program and the physiology of exercise program is granted any quarter. For these programs the student should submit his or her completed application one month prior to the desired entrance date. The sports administration program grants admission only for the summer and fall quarters. Sports administration applicants for June admission must complete their application by March 1; for September admission, April 1.

*Refer to Health Services Administration elsewhere in this catalog.

500 Guided Independent Study (1-2)

Prereq: perm. Selected areas of study with written report based on research.

Higgins; F, W, Sp, Su, Y.

501 Seminar on International Sport (3)

Review of selected physical education and sport programs in various countries and discussion of issues and problems related to international sport competition.

Cook; F, Y.

504 History and Principles of Physical Education (4)

Prereq: grad rank. Origins and development of physical education and sport from time of primitive people through Greeks, Romans, Germans, English, and Americans; biological, psychological, sociological, and curricular principles underlying modern physical education program.

Cook; S, Y.

506 Organization and Administration of Physical Education and Sport (5)

Theory and practice in organizing and administering various physical education, intramural, athletic, sport, and recreation programs at public school, college, and community levels.

Cook; Sp, Y.

507 Problems of Competitive Athletics (3)

Prereq: grad rank. Analysis of problems associated with athletic competition at all age and performance levels.

Lavery; F, Su, Y.

508 The Black Athlete and American Sport (3)

Prereq: grad rank. Explores origins of black athlete's participation in American sport and examines role of black men and women in growth of American sport and physical activity during 19th and 20th centuries.

Cook; W, Y.

509 Advanced Tests and Measurements (4)

Review of descriptive statistics, introduction to use of computers, inferential statistics, class problems, using data collection, computer input, and statistical analysis.

Wilkinson; Sp, Y.

510 Athletic Administration Seminar (3)

Prereq: grad rank (Cr-F grading only). Introduction to various aspects of athletic administration, responsibilities of athletic director, business manager, sports information director, athletic trainer, ticket manager, facility construction and management, security, crowd control, and facility utilization are presented and discussed.

Lavery; Sp, Y.

511 The Olympic Movement (3)

Study of origin and development of games from Greek era to modern period. Meaning of Olympism in relation to contemporary summer and winter Olympiads explored.

Cook; F, Y.

513 Health Aspects of Aging (3)

Prereq: grad rank and HLTH 202 or perm. Theories of aging involving changes in structure and performance presented. Emphasis on: (1) normal aging changes; (2) positive mental health and aging; (3) health promotion and maintenance of wellness; and (4) community health.

Bonagura; Sp, Y.

514 Physiology of Exercise (4)

Fundamental concepts describing reaction of organ systems to exercise, study of work produced by muscle. Special areas include sport conditioning, muscular fatigue, physiology, and nutrition in exercise; weight control and exercise; physical fitness; exercise and environmental stresses; review of recent research in exercise physiology and human performance.

Hagerman; F, Y.

515 Physiology of Exercise Laboratory (2)

Prereq: grad rank. Lab experience to complement material covered in 514. Grad students must take 514 and 515 concurrently.

Hagerman; F, Y.

519 Health Education for the Elementary School (4)

Application of principles of curriculum development, identification of appropriate concepts and practices, and use of teaching methods and resources at elementary school level.

Sp.

520A Advanced Athletic Training — Part I (3)

Prereq: HSAT 329 or equiv. Advanced techniques in prevention, management, and rehabilitation of athletic injuries—sequence course.

Scheiderer; W, Y.

520B Advanced Athletic Training — Part II (3)

Prereq: HSAT 520A. Advanced techniques in prevention, management, and rehabilitation of athletic injuries—sequence course.

Scheiderer Sp; Y

524 The Legal Aspects of Athletics, Athletic Injuries, and Recreation (2)

Prereq: grad rank. Legal approach to athletics, athletic injuries, and physical education as studied through investigation of concepts and principles which provide legal framework within which courts view cases bearing on athletics, athletic injuries, physical education, and recreation.

Higgins; W; Y

525 Injury Prevention Techniques in Sports Medicine (3)

Prereq: grad rank. In-depth study of evaluating and developing conditioning techniques and programs for prevention of athletic injuries.

Staff; F; Y

526 Seminar in Sports Medicine Problems (3)

Prereq: grad rank or perm. Thorough examination of problems that exist in sports medicine as reviewed by various allied health professions.

Vosler; Sp; Y

528 Injury Pathology (2)

Prereq: grad rank or perm. Thorough study of structural changes of tissue caused by athletic injuries.

Mattmiller; F; Y

530 Muscle Testing and Applied Actions (2)

Prereq: grad rank or perm. Methods for objective evaluations of effects of neuromuscular impairment injuries and measurement of changes in neuromuscular functioning.

Scott; W; Y

540 Analyzing Performance in Physical Education (3)

Prereq: grad rank. Methods of analyzing performance problems in physical education (process of analyzing performance problems will include identification of source of problem, specifications of solutions, intervention tactics, and evaluation of behavior change).

Staff; Sp; Y

545 Facility Management and Programming (3)

Principles and requirements related to programming and managing various types of public facilities.

Stevens; F; Y

549 Administration of Community Recreation (4)

Prereq: grad rank. Administration of public recreation services; programs and facilities; fiscal considerations, including grant writing; and legal considerations.

Dingle; W; Su; Y

550 Practicum (1-5, max 10)

Prereq: grad rank and perm. Supervised work experience in various aspects of administration of intercollegiate and interscholastic athletics.

Lavery; F; W; Sp; Su; Y

553 Clinical Observation and Practice in Physical Medicine and Rehabilitation (6)

Prereq: perm. Concentrated summer school field course at Veterans Administration Hospital, Chillicothe, Ohio.

Staff; Su; A

555 Psychology of Coaching (3)

Prereq: grad rank. Analysis of psychological factors and principles with special reference to emotional, attitudinal, and personality problems of athletes.

Higgins; Sp; Su; Y

560 Understanding Play (4)

Prereq: grad rank and perm. Designed to explore meaning, theories, and development of play from infancy through middle childhood.

King; Sp; Y

575 Adventure Programming (3)

Principles and procedures involved with planning, organizing, and conducting various types of outdoor adventure activities on national state private facilities.

Dingle; Sp; Y

580 Safety in the Public Schools (4)

Prereq: grad rank. Concepts and fundamentals of safety education and safety education programming as it relates to public schools.

Higgins; Su; Y

585 Advanced Perceptual Motor Development in Children (3)

Prereq: admission to grad study. Seminar in field of perceptual motor development in preschool and primary grade children. Special emphasis on practical application of theory and research findings to areas of movement performance and learning readiness.

Miller; Sp; Y

586 Motor Performance of the Exceptional Child (4)

Prereq: grad rank and perm. Emphasizes skills and theory related to teaching physical education to children and youth who exhibit variety of handicapping conditions. Professional and advocacy responsibilities in planning and implementing psychomotor aspects of individualized education programs will be taught.

Miller; Sp; Y

590 Community Health Programs (4)

Prereq: perm. Institutional framework and activities of various agencies promoting and maintaining health of people of community, state, and nation.

Bonaguro; W; Y

595 School Health Problems (5)

Organization and administration of school health programs including school and community relationships.

Phillips; F; W; Su; Y

601 Contemporary Issues (4)

Selected problems in sport and physical education programs; research reading, discussion, analysis, written reports.

Simon; Sp; Y

610 Curriculum in Physical Education (4)

Prereq: grad rank. Consideration of curricular trends and theories for today and for future. Construction and development of curricula for elementary, secondary, or college and university levels.

Staff; W; Su; Y

611 Special Problems (1-6)

Prereq: 691, perm. Individual research and experimentation of professional issues. Identification of pertinent problems and plan effective attack toward potential solution.

Staff; F; W; Sp; Su; Y

652 Physical Diagnosis (4)

Program development relative to student health for physical education instructors, coaches, and allied professionals. Techniques of physical examinations and treatment considerations pertaining to common injuries and illnesses suffered in physical education and athletics.

Mattmiller; W; Su; Y

660 Internship in Sports Administration (1-5)

Prereq: grad rank in sports administration, perm (Cr-F grading only). Supervised professional work experience in approved sports-oriented organization.

Higgins; F; W; Sp; Su; Y

691 Seminar in Physical Education (4)

Research and investigation in health, physical education, and recreation. Topics and problems suitable for thesis writing, methods of research, writing practice, and critical analysis of outlines for research study.

Phillips; F; Su; Y

691A Seminar in Athletics (4)

Research in athletic administration. Topics and problems suitable for thesis writing, reviews of completed research, development of questionnaires, position papers, and evaluative instruments applicable in athletic administration.

Wilkinson; F; Su; Y

692 Foundations of Physical Education (5)

Prereq: grad rank. Historical, philosophical, psychological, scientific, and sociological basis of physical education and sport.

Simon; F; Y

695 Thesis (1-15)

Cook; F; W; Sp; Su; Y

HEALTH SERVICES ADMINISTRATION

A program leading to the master of health services administration is planned for initiation during the fall quarter of 1983. The program, including all of the new courses, has been developed and approved by the University. Final approval by the Ohio Board of Regents is pending.

The health services administration program consists of three sequences: a general management and administration core of courses totaling between 29 and 33 credit hours, a specific health services administration core of courses totaling 43 required credit hours, and at least 12 additional credit hours from among designated elective courses. A total of 88 credit hours is required for graduation.

For admission to the program a student must fulfill all of the general requirements for admission to graduate-level study; have completed a bachelor's degree from an accredited institution, with a minimum g.p.a. of 2.8; submit three letters of reference of academic and professional abilities and achievements; submit a statement of interest and intent summarizing previous professional experiences and career goals; and satisfy all prerequisite-course deficiencies. The program director and members of the Program Admissions Committee approve all admissions. Admission to the program is granted any quarter.

The following courses have been developed and approved for the health services administration program and are available for use in an Individual Interdisciplinary Program (IIP).

603 Health Services Administration I (4)

Prereq: MGT 500 or POLS 511 or with MGT 500 or POLS 511. Structure, organization, and function of contemporary health care delivery systems with emphasis on rural health services components, changing characteristics, and interrelationships with implications for future.

Staff; F; Y.

612 Seminar: Health Services Administration II (5)

Prereq: 603. Integration of various elements of medical care and aspects of health services administration with concentration on human resources management in health administration, labor relations, medical care appraisal, quality assurance, and application of administrative skills and concepts.

Staff; F; Y.

620 Medicine In Society (4)

Prereq: grad rank or perm. Examines social, cultural, and environmental influences which determine or impact on how persons define health problems, participate in health maintenance programs, and utilize medical and other health services.

Chambers; W; Y.

630 Epidemiology In Health Planning (4)

Prereq: grad rank or perm. Constructs rational basis for setting priorities and allocating scarce health care resources. Examines ways in which methodologically sound health statistics can be introduced into practical arena of planning health services.

Chambers; Sp; Y.

650 Comprehensive Health Planning (4)

Prereq: grad rank or perm. Techniques and methods essential for planning, with emphasis on application in social technical systems and special emphasis on planning in rural health care delivery systems.

Staff; F or Sp; Y.

690 Independent Study (1-6)

Prereq: grad rank and perm. Advanced individual creative and scholarly work in health services administration and closely related fields.

Staff; F, W, Sp, Su; Y.

693 Special Topics Workshops (1-5)

Prereq: grad rank and/or perm. Selected topics not covered in regular offerings in health services administration and closely related fields.

Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)

Prereq: completion of course requirements and perm. Application of principles and practices to selected problems of study in field of health services administration.

Staff; F, W, Sp, Su; Y.

698 Health Services Research and Program Evaluation (5)

Prereq: SOC 654 or equiv course in quantitative methods. Application of socio-behavioral research design and methodology to selected health administration topics and analysis of component of program evaluation. Quality assurance law, audits, PSRO, and accreditation standards studied.

Staff; W; Y.

701 Administrative Internship (4-6)

Prereq: completion of 60 credit hrs and perm. Applications of skills and principles of health services management within se-

lected institution or agency facilitated in this residency program. Opportunities for further dialogue among interns, faculty, and practitioners provided by seminars scheduled throughout residency.

Staff; F, W, Sp, Su; Y.

HEARING AND SPEECH SCIENCES

The graduate program provides course structure and required practicum in speech and language pathology, audiology, speech science, and combinations of these areas for students wishing to concentrate in clinical areas, research activity, and/or teaching opportunities.

The academic programs in speech pathology and audiology are accredited by the American Board of Examiners in Speech Pathology and Audiology of the American Speech-Language and Hearing Association. Financial support is available in the form of graduate associateships and scholarships provided by the University. The school frequently can support M.A. candidates throughout their course of study.

The Ohio University Speech and Hearing Clinic consists of eight primary therapy rooms, four diagnostic or conference rooms, a two-suite audiological testing area, a television control room, and a well-stocked equipment and materials room. Closed circuit television is used throughout the majority of the clinic. Observation is done through television monitors or through one-way mirrors located in the therapy rooms.

Off-campus facilities to which a student might be assigned include day-care centers, schools or institutions for retarded individuals, diagnostic centers, classes for the hard-of-hearing or deaf, hospital or rehabilitation facilities, and area speech and hearing service clinics.

All applicants for the master's and doctoral programs must submit scores for either the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) as a part of their applications.

MASTER'S PROGRAM

Prospective graduate students should present a minimum of 36 quarter hours of speech and hearing courses including phonetics, speech science (acoustics relating to speech and hearing), language development, anatomy and physiology of speech and hearing, basic audiology, and coursework in speech disorders as well as outside related coursework. These undergraduate courses that have not been taken must be taken by the student but will not count as graduate program hours.

Students from other disciplines are encouraged to apply. They are required to complete a year of preparatory coursework prior to beginning the regular graduate sequence. Financial support may be available.

Academic ability, experience records, three letters of recommendation, and either GRE or MAT scores are considered for the admission of students. A minimum grade-point average of 3.0 (on a 4.0 scale) for all undergraduate coursework is required for consideration into the program. Due to the sequential nature of the program, admission may be limited to summer or fall enrollment with exceptions made for students entering from other disciplines.

Requirements for the six-quarter M.A. in speech-language pathology include extensive academic training in speech-language pathology; electives in areas such as speech pathology, psychology, linguistics, special education, and audiology; clinical practicum; and clinical internship. Requirements for the six-quarter M.A. in audiology include a well-planned sequence of academic coursework in audiology, elective hours, clinical practicum, and clinical internship. During the clinical internship, students are provided full-time clinical training for approximately ten weeks in some approved external setting such as hospitals, schools, multidisciplinary clinics, or rehabilitation centers.

DOCTORAL PROGRAM

The doctor of philosophy degree provides for the acquisition of a relatively broad background in the hearing and speech sciences with the primary areas being speech and language pathology, and hearing and speech science. The doctoral program em-

phasizes the academic disciplines of research and teaching. The development of skills in research and scholarly writing is of primary importance. In addition, experiences in teaching are also a major aspect of the doctoral-level training. While the primary objective of doctoral study is to increase academic and research abilities, participation in clinical activities is incorporated into each student's program of study.

Applications for admission to graduate study at the doctoral level are considered individually by the staff. To be eligible for admission without condition, an applicant must have completed either the master's degree in the field of hearing and speech sciences or the substantial equivalent of the course requirements for this degree, and show evidence of superior scholarship, a genuine interest in research, good character, and other personal attributes appropriate to a potential member of a learned profession. Students should have completed one year of professional experience.

Among the general requirements for the degree is a total of 150 quarter hours of graduate credit beyond the bachelor's degree, of which up to 24 hours may be earned for the dissertation. In addition the student must carry a major of at least 54 quarter hours (other than dissertation credit). At least 27 quarter hours of the major must be taken at Ohio University as part of the doctoral program. Two minors of at least 15 quarter hours each must be taken. One minor must be outside the school and one minor may be inside the school. The rest of the 150 hours of the program requirement, may be distributed among any of the categories listed above or in appropriate elective courses approved by the student's guidance committee. The total program is planned by the student and his or her advisor, and is subject to the approval of the student's guidance committee.

518 Disorders of Articulation (4)

Prereq: perm. Phonetic acquisition, articulation evaluation, theories, and techniques of therapy.

Garber, Fokes; F; Y; 1982.

524 Neuropathologies of Speech and Language (4)

Prereq: perm. Types, causes, syndromes of more significant pathologies of speech and language. Concentration on neurological disorders.

Dean, Ham; W; Sp; Y; 1982.

536 Speech and Hearing Disorders In the Public Schools (3-4)

Nature, causes, treatment of speech disorders in public schools; special reference to role of classroom teacher. (Not open to HSS majors.)

Staff; F, W, Sp; Y; 1977.

537 Speech and Hearing Therapy In the Public Schools (2)

Prereq: concurrent with practicum. Methods, organization, and implementation of public school speech and hearing programs. (Majors only.)

Staff, F, W, Sp, Su; Y; 1982.

543 School and Clinical Programs (2)

Prereq: majors only. Organization, planning, and function in public school, community, and agency programs. Prerequisite to student teaching.

Isele; W; Y; 1981

544 Disorders of Language (4)

Prereq: 510, 518, or equiv. Introduction to study of language disorders in children. Diagnosis, assessment of language abilities. Methodologies and techniques in language remediation.

Fokes, Garber, W; Y; 1982

545 Social Dialects (3)

Prereq: 509, 510, or equiv. Introduction to study of social dialects. Problems and controversies surrounding issue. Training in recognition of dialectal variations and in teaching standard English to speakers of other dialects.

Bond, Fokes, Sp, Y; 1981

571 Auditory Rehabilitation (5)

Prereq: perm. Basic remedial procedures for hearing handicapped. Practice in planning for speech reading and auditory training.

Christopher, F, W, Y; 1982

579 Basic Manual Communication (2)

Prereq: HSS majors perm. Basic instruction and practice in finger-spelling and signing used by and for deaf and hard of hearing.

Christopher, F, W, Y; 1982

602 Research Methods In Speech and Hearing (4)

Research methodologies and critical examination of existing re-

search. Required of all thesis and dissertation students. May be repeated for credit.

Bond; Su; D; 1982.

603 Neuroanatomy of Speech, Language, and Audition (4)

Prereq: perm. Complete study of neuroanatomy with emphasis on speech, language, and auditory processes. Students majoring in speech pathology will receive detailed instruction in anatomical construction of respiration, phonation, and articulation as related to central nervous system. Students majoring in audiology will receive detailed instruction in anatomical construction of audition as related to central nervous system. All students will receive morphological instruction with respect to central nervous system, peripheral nervous system, and autonomic nervous system.

Fucci, Ham; F; Y; 1982.

611 Management of Language Disorders in Children (4)

Prereq: perm. Intended to provide graduate students in speech pathology with in-depth knowledge of language intervention strategies for children exhibiting disorders of language. Areas of therapy considered will include development of prelinguistic skills, pragmatic as well as semantic and grammatical aspects of comprehension and production.

Garber; Sp; Y; 1982.

612 Theories In Language Acquisition and Behavior (4)

Prereq: perm. Language and cognitive development, verbal learning and structural properties of speech.

Fokes; Sp; Y; 1978.

613 Developmental and Disordered Phonology (4)

Prereq: perm. Offered for students concerned with phonological problems associated with overall language disorder. Students majoring in speech pathology will receive instruction in theories of phonological acquisition, stages of development, descriptions of deviant systems, methods of data collection and analysis, and suggestions for remediation.

Fokes; F; Y; 1981.

617 Disorders of Fluency (4)

Stuttering related to theory, research, and therapy. Students select and develop area of interest.

Dean; Sp; Y; 1981.

621 Advanced Disorders of Voice (4)

Prereq: perm. Review of anatomy and normal physiology of vocal mechanism. Organic and functional voice problems and related therapy. Research problems in diagnosis and therapy.

Dean, Fucci; W; Y; 1981.

623 Advanced Diagnostic Procedures in Speech and Language Disorders (4)

Prereq: perm. Discussion of diagnostic models; interviewing procedures, including intakes, referrals, and counseling; etiology of speech and language disorders; special evaluative techniques, standardized and informal, including speech, language, neurological, behavioral, cognitive, and motor assessments; direct clinical experiences.

Garber; Sp; Y; 1982.

624 Neurological and Structural Disorders of Articulation (4)

Prereq: perm. Intended to provide graduate students with in-depth knowledge of nature and habilitation of motor speech disorders of organic etiology. Primary focus on articulation disorders resulting from structural lesions and muscle incoordination and weakness.

Dean; W; Y; 1981.

626 Language Problems of the Mentally Retarded (4)

Prereq: graduate majors only. Evaluating level of language development of trainable mentally retarded children. Techniques for assisting mentally retarded children to develop language.

Fokes, Garber; F; Y; 1975.

627 Medical/Surgical Aspects of Communication Disorders (4)

Prereq: grad majors only. Discussion of medical and surgical treatments for various speech and hearing disorders. Readings in medical literature and familiarization with terminology and philosophies of treatment.

Isele, Sp, Y; 1982.

629 Aphasia (4)

Prereq: grad student majors only. Aphasia, etiologies in adult aphasia, evaluation and rehabilitation of adult aphasia.

Dean, F, Y; 1982

630 Cerebral Palsy (3)

Prereq: perm. Cerebral palsy, etiologies, related problems; theories and procedures for habilitation.

Dean; Fucci; D; 1980.

635 Practicum in Diagnosis and Therapy (1-15)

Diagnosis, planning of therapy, therapy experience. 1 staff meeting per wk. May be repeated. Credit beyond 3 hrs must be approved.

Conover; F; W, Sp, Su; Y; 1982.

636 Clinical Internship (15)

Prereq: 3 qtrs of graduate practicum experience; approval of coordinator of clinical services. Graduate students will be placed in clinical facilities for 1 qtr of experience. Facilities used will be cooperating clinics or agencies in other areas. It is expected that student will experience all types of diagnostic or therapy practicum during this qtr, under supervision of certified speech pathologist or audiologist.

Staff; F; W, Sp, Su; Y; 1982.

652 Experimental Phonetics I (4)

Prereq: perm. Acoustic properties of speech signals and study of speech production. 3 lec and required lab.

Bond; F; Y; 1981.

653 Experimental Phonetics II (4)

Prereq: 652 or equiv. Acoustical and physiological phonetics relating to speech perception. 3 hrs lec and 2 hrs lab required per wk.

Bond; Sp; D; 1980.

654 Experimental Instrumentation (4)

Prereq: perm. Instrumentation utilized in audiology and speech science.

Seaton; Su; D; 1982.

661 Psychosocial Aspects of Hearing Impairment and Modes of Communication for the Aurally Handicapped (4)

Prereq: perm. Provides students with knowledge and skills to enable them to function competently when providing service to hearing-impaired client. Prepares audiologist/speech pathologist to better understand semantics of deafness as well as alternate modes of communication as used by those who are hearing impaired.

Christopher; Sp; Y; 1982.

662 Advanced Aural Rehabilitation (4)

Prereq: perm. Provides students with knowledge and skills to enable them to function competently as (re)habilitative audiologists. Prepares audiologist to structure and execute programs of (re)habilitation for hearing impaired in clinical and/or educational settings.

Christopher; W; Y; 1982.

663 Pediatric Audiology (4)

Prereq: perm. Provides grad students with information and skills in pediatric audiology. Students will develop competence in assessment of hearing of infants and preschool children. Emphasizes etiological factors of hearing loss, development of auditory function and behavior, and assessment techniques.

Isele; W; Y; 1982.

664 Industrial Audiology and Hearing Conservation (2)

Prereq: perm. Provides students with essential information and skills to enable them to perform professional roles of audiologist in industrial setting and/or manage hearing conservation program. Prepares students for responsibilities of audiologist in hearing conservation programs which require hearing testing of large populations.

Isele; F; Y; 1981.

672 Clinical Audiology for Speech Pathologists (4)

Prereq: perm. Attempts to provide speech pathologist with basic understanding of various audiological procedures used in hearing evaluations with children and adults. Discussion of methodology, procedures, interpretation of results, and application to rehabilitation procedures included. Lab time to learn basic instrumentation and test procedures provided.

Isele; W; Y; 1982.

673 Clinical Audiology I — Basic Audiological Tests (4)

Prereq: perm. Topics include pure-tone threshold assessment, speech audiometry, development of audiometric standards, development of materials for speech audiometry, factors affecting threshold measurement, mechanisms of air- and bone-conduction, theoretical bases of clinical masking, procedures for clinical masking.

Isele; Walence; F; Y; 1982.

674 Clinical Audiology II — Hearing Aids and Amplification Systems (4)

Prereq: perm. Clinical hearing aid selection and counseling procedures. Lab practice with electroacoustic measurements of aids and testing methodologies.

Isele; W; Y; 1981.

675 Clinical Audiology III — Electrophysiological and Electroacoustical Measurements (5)

Prereq: perm. Electrophysiological and electroacoustical measurements as applied to human hearing with emphasis on ERA and measurements of middle ear function.

Isele; Sp; Y; 1982.

676 Psychoacoustics (4)

Prereq: 6 hrs audiology above 600 level. Overview of classical and contemporary psychophysical methods, physics of sound, excitation of cochlea and auditory nerve, frequency analysis, pitch perception, nonlinear distortion, loudness, frequency, and intensity discrimination.

Seaton; F; Y; 1982.

677 Bioacoustics (4)

Prereq: 6 hrs of audiology above 600 level. Ear as transducer and analyzer; electrophysiological and mechanical properties of ear.

Seaton; F; Y; 1975.

680 Advanced Manual Communication (2)

Prereq: 579 or equiv. Advanced instruction and practice in finger-spelling and signing used by and for deaf and hard of hearing.

Christopher; W; Sp; Y; 1981.

694 Directed Study and Research (1-15)

Must be approved by staff prior to registration. (May be repeated for credit.)

Staff; F; W, Sp, Su; D; 1982.

695 Thesis (1-15)

Staff; F; W, Sp, Su; D; 1982.

725 Seminar in Clinic Administration (1-4)

Prereq: perm. Organization and administration of clinical and academic programs in speech pathology and audiology.

Ham; Su; D; 1981.

731 Seminar in Speech Pathology (4-5)

Prereq: perm. Current literature and recent research, changing topic each qtr. (May be repeated for credit.)

Staff; F; W, Sp, Su; D; 1981.

732 Seminar in Supervision (1-4)

Prereq: perm. Preparation of advanced students for employment in teaching-training programs and service centers. Individual assignments and specific experience in supervision of diagnostics, therapy, and research, plus administrative supervision.

Conover; Sp; D; 1980.

733 Professional Training Seminar (3-5)

Prereq: perm. Special topics, changed each offering. Development of special interest areas and innovative procedures. (May be repeated for credit.)

Staff; F; W, Sp, Su; D; 1976.

755 Seminar in Speech Science (1-4)

Prereq: perm. Topics in speech science and related areas. Required papers.

Bond; D; 1980.

756 Seminar in Research Problems (1-4)

Prereq: perm. Organization and preparation of research in scholarly form. Analysis and evaluation of research writing in various areas. Required application of principles to seminar projects.

Staff; F; W, Sp, Su; D; 1981.

778B Seminar in Audiology — Current Problems (1-4)

Prereq: perm. Current problems and areas of research. Individual reading projects and seminar reports.

Staff; F; W, Sp, Su; D; 1977.

794 Directed Study and Research (1-15)

Must be approved by staff prior to registration. Final product reviewed by faculty committee. (May be repeated for credit.)

Staff; F; W, Sp, Su; D; 1981.

895 Dissertation (1-15)

Staff; F; W, Sp, Su; D; 1982.

HISTORY

The graduate program in history is intended to prepare students for secondary school teaching, teaching at the college level, and a wide variety of other pursuits. Each applicant is expected to have completed 24 semester hours or 36 quarter hours of undergraduate history courses, including basic survey courses in European and American history or their equivalent, and at least three semester-length or four quarter-length courses at the junior-senior level. Exceptions to this requirement may be considered for applicants with outstanding undergraduate records in other fields. Deadline for application to either the M.A. or the Ph.D. program for fall quarter admission is July 1; for financial assistance, deadline is March 1.

MASTER'S PROGRAM

An M.A. program is offered with work in the history of the United States, Europe, Latin America, Africa, the Middle East, and East and Southeast Asia. Thesis and nonthesis programs are available. The general requirements for the M.A. in the thesis program are eight graduate courses plus a thesis-seminar combination. The general requirements for the nonthesis are 12 graduate courses including one seminar. No foreign language is required for admission to the program, but students in the thesis program must demonstrate a reading proficiency in one foreign language prior to submission of the thesis. The nonthesis M.A. program is usually regarded as terminal.

DOCTORAL PROGRAM

The candidate must offer a minimum of six quarters of residence credit as a full-time equivalent student beyond the master's degree. Each candidate is required to show reading proficiency in at least two foreign languages where language training is essential to major research. He or she must complete a minor of three graduate courses in one cognate field or of four courses in two cognate fields. Within the area of concentration the student will select two special fields, in one of which the dissertation will be written. He or she will also choose two special fields outside the area of concentration. Areas of concentration are as follows:

Area One: American History: Colonial, 19th Century, 20th Century. U.S. Foreign Relations, U.S. Economic, U.S. Social-Intellectual.

Area Two: European: Western Europe, European Diplomatic, Tudor-Stuart England, England since 1714, Balkans, Russia, Renaissance and Reformation, Medieval, Ancient.

Area Three: Third World: Africa, Southeast Asia, East Asia, Middle East and Mediterranean, Latin America.

500A Colonial America to 1689 (5)

English background, establishment of settlements, first economies, evolution of political and religious structures. Relations with England, internal conflicts, Glorious Revolution.

Steiner, Y

500B Colonial America 1689-1763 (5)

Governmental changes, credit and currency, Great Awakening, cultural developments. Old Colonial System, Anglo-French rivalry, nature of colonial society, problems of maturing political units.

Steiner, Y

500C Revolutionary Era, 1763-1789 (5)

Causes, course, and consequences of American Revolution.

Steiner

502 American Indians (5)

Treats Indian society before white contact, Spanish, French, and English impact, Indian removal, Indian wars; problems of cultural contact, preservation versus assimilation, Indian society today.

Daniel, Y

503 United States in World War II (5)

Military and diplomatic role of United States in WW II, political, economic, and social impact of war on that nation

Lobdell, Y

504 Founding the American Republic: 1789-1815 (5)

Shaping America's political, social, and economic institutions, constitutional development and foreign policy from Federalists (Washington and Adams) through Jeffersonians

Staff, D

505 The United States and the Vietnam War (5)

Examination of American experience in Vietnam, both in terms of military and diplomatic history of war itself, and its impact on American society.

Gaddis, Y

508A Sectional Controversy: 1815-1850 (4)

Conflicts of aristocratic and democratic (Jacksonian) elements in American society and politics; problems arising from slavery, westward expansion, industrial growth, immigration, and reform movements.

Field, Y

508B The Civil War and Reconstruction (5)

Forces making for increased sectionalism in 1850s; rise of new parties; military engagements; society and institutions in North and Confederacy during wartime; attempts to restructure Southern society after war and why they failed.

Field, Y

508C Foundations of Modern America: The Gilded Age, 1877-1901 (5)

Labor unrest, nativism and anti-semitism, imperialism, government corruption, Social Darwinism, urban growth, Victorian morality, and Indian wars examined as outgrowths of efforts of American people to adapt to modernization and industrialization in late 19th century.

Field, Y

510A United States in Recent times, 1900-1920 (5)

Progressive Era, American imperialism, WW I, rejection of Wilsonian liberalism.

Lobdell, Hamby, Y

510B United States in Recent Times, 1920-1939 (5)

Temper and culture of 20s; Republican ascendancy and Democratic revival; Great Depression; F. D. Roosevelt and New Deal.

Lobdell, Hamby, Y

510C United States in Recent Times, Since 1939 (5)

Abandonment of isolation; WW II; American politics in later Roosevelt years; Cold War; Truman and Fair Deal; politics and problems of 50s and 60s.

Lobdell, Hamby, Y

512 History of Industrial Revolution in the United States, 1850-1917 (5)

Origins of factory system; impact of Civil War; rise of heavy industry; problems of financing and control; influence of progressive era.

Daniel, D

514A Social and Cultural History of the United States, 1607-1820 (5)

Role of minorities, class structure, and religion in forming American society; development of American painting, architecture, music, literature, education, and science as expressions of Puritanism, Enlightenment and nationalism.

Daniel, Y

514B Social and Cultural History of the United States, 1820-1890 (5)

Role of minorities, class structure, and religion in forming American society; development of American painting, architecture, music, literature, education, and science as expressions of Romanticism, Social Darwinism, and Pragmatism.

Daniel, Y

514C Social and Cultural History of the United States, 1890 to Present (5)

Role of minorities, class structure, and religion in forming American society; development of American painting, architecture, music, literature, education, and science as expressions of Pragmatism and Existentialism.

Daniel, Y

514D American Social Thought to 1815 (5)

Major aspects of intellectual history of American colonies and United States to 1815, organized around 2 major themes: Puritanism, and secularization of American thought in 18th century.

Alexander, Y

514E American Social Thought, 1815-1890 (5)

Major aspects of intellectual history of U.S., 1815-1890, stressing rise of romantic nationalism, triumph of democratic attitude; slavery controversy; impact of Civil War and Darwinian evolution.

Alexander, Y

514F American Social Thought, 1890 to the Present (5)

Major aspects of intellectual history of U.S. since 1890, with principal attention to continuing impact of evolutionary naturalism, especially in development of pragmatism; trends in Left and Right political ideologies; rise of pessimistic theology and its ramifications; modernism in arts; New Radicalism and Counter Culture.

Alexander; Y.

515A History of the Black Man in America to 1865 (5)

Beginning with introduction of slavery in 1619, course deals with black man's role in America to beginning of Civil War. Concerns slavery, abolition, and many attempts by black people to improve their position.

Fletcher; Y.

515B History of the Black Man in America Since 1865 (5)

Emancipation and its continuing effects on black man in America. Life in South, migration to North, and conservative and radical attempts by black community to deal with these problems.

Fletcher; Y.

516A History of United States Foreign Relations to 1914 (5)

U.S. foreign relations from war for independence to WW I, stressing development of traditional policies — isolationism, neutrality, Monroe Doctrine — and emergence of U.S. as world power.

Gaddis; Y.

516B History of United States Foreign Relations, 1914-1945 (5)

American foreign relations in 2 world wars and interwar period, emphasizing shifting perceptions of vital interests involved in transition from intervention to non-entanglement to intervention again and emergence as super power.

Gaddis; Y.

516C History of United States Foreign Relations, 1945-Present (5)

American foreign relations in Cold War and after, emphasizing confrontation between U.S. and Communist world, emergence of detente, and background of current foreign policy issues.

Gaddis; Y.

517A Ohio History to 1851 (5)

Moundbuilders and Indians, Anglo-French rivalry, Revolution, territorial development, patterns of settlement, Constitution of 1802, evolution of political parties, transportation and economy, banking and currency, Constitution of 1851.

Staff; Y.

517B Ohio History Since 1851 (5)

Slavery and restructuring of political parties; Civil War, rise of industry, politics in progressive era, Great Depression and aftermath, post-WW II Ohio.

Staff; Y.

518 American Westward Movement (5)

Role of western frontier in American development to 1890. Explorations, Indian trade, land policies, pioneer life, traders and trappers, miners, cattlemen, railroad builders, and farmers. Emphasis upon historical interpretation.

Daniel; D.

519 Sports in American History (5)

Survey of evolution of organized sports in U.S., focusing on major spectator sports. Emphasis on personalities and particular events rather than sociological and psychological theorizing.

Alexander; Y.

520 History of the Middle West (5)

Development of political, economic, and social institutions; attitudes characteristic of Ohio and Middle West since 1787. Emphasis on 20th century community relationships, problems, and forms of behavior.

Staff; D.

521A History of the Military in America: 1600 to 1898 (5)

Military institution in American history; role of technology in warfare, innovations and reforms in military; war and its conduct; military and civilian society in war and peace.

Fletcher; Y.

521B History of the Military in America: 1898 to Present (5)

Continuation of 521A.

Fletcher; Y.

522 Latin America in the 19th Century (5)

Causes of wars for independence; institutional adjustments during and after wars; problems of regionalism and caudilism; influence

of liberalism and positivism in shaping Latin America republics; emphasis on Argentina, Brazil, and Mexico.

Grow; D.

523A Latin America Survey: Colonial Period (5)

Pre-Columbian civilization; conquest and colonization; evolution of institutions; wars for independence.

Grow; D.

523B Latin America Survey: National Period (5)

Demolition of colonial order and struggle for nationality in 19th century; 20th century reform, revolution, and development of modern nation states.

Grow; D.

525 Inter-American Relations (5)

Diplomatic history of Latin America since independence; state-to-state relations within Latin America; relations with U.S., western Europe and communist nations; participation in world wars and in international organizations.

Grow; D.

526A Recent Latin America: Argentina, Brazil, and Mexico (5)

Reshaping and modernization of Mexico by revolution. Struggle to convert Argentine and Brazilian regionalisms, divided societies, and resources into modern, urban, integrated nations.

Grow; D.

526B Recent Latin America: Andean Nations (5)

Varied experience of Andean republics under onset of modernization.

Grow; D.

526C Recent Latin America: Central America and the Island Republics in the 20th Century (5)

Influence of U.S.: search for nationality and modernization. Special attention to Cuban history.

Grow; D.

528 The World of Aristophanes (5)

Political, social, and cultural institutions of Greece in 5th century B.C. with special emphasis on city of Athens.

Richter; D.

529A Ancient Egypt and Mesopotamia (5)

Prehistoric eras; origin of Mediterranean civilizations; problems of ancient chronology; civilizations of Sumerians, Babylonians, Egyptians, Assyrians, Biblical Hebrews, and Persians. Stresses archaeological and literary sources, comparative social and religious concepts, acculturation, contributions to western civilization.

Richter; Y.

529B Ancient Greece (5)

Aegean prehistory. Minoan civilization, Mycenaean Greeks, Dorian invasions, Greek Renaissance, growth of the polis, Athenian society and culture, Persian and Peloponnesian wars, political history of Greece to Alexander. Stresses archaeological sources, mythology, and drama, Hellenic contributions to western civilization.

Richter; Y.

529C Ancient Rome (5)

Early peoples of Italy, Etruscans, constitutional development of republic, growth of empire, civil wars, history of principate to Constantine. Stresses archaeological sources, Latin literature, Roman life and institutions, Roman contributions to western civilization.

Richter; Y.

533 Oil, Energy, and International Diplomacy (5)

Prereq: grad rank (MA.). Historical perspective on continuing energy crisis. Focuses attention on development of worldwide petroleum industry with particular attention to Middle East and North Africa; shows role of oil as generator of international tensions.

Doxsee; D.

534 The Arab-Israeli Dispute (5)

History of Arab-Israeli confrontation since 1890. Origins of Zionism and Arab Nationalism, impact of WW I and Peace Settlement, British Mandate for Palestine, political developments in Israel and Arab World since 1948, and recent Great Power involvement in problem.

Doxsee; Y.

535A Middle East History to 1800 (5)

Islamic history and civilization from rise of Islam to end of 18th century. Role of prophet Muhammad, doctrines and institutional system of Islam, medieval Islamic caliphates and their cultural

achievements, and contributions of Persians and Turks to Islamic civilization.

Doxsee; Y.

535B Middle East History Since 1800 (5)

History of Middle East since era of French Revolution. Disintegration of Ottoman Empire; emergence of contemporary Middle East political system; impact of nationalism, secularism, and industrialism on region; and position of Middle East in contemporary world affairs.

Doxsee; Y.

536A North Africa In Modern Times (5)

The Maghrib: its geography, ethnic composition, and history since antiquity; French conquest of Algeria, Tunisia, and Morocco; administrative systems; economic development; French-Muslim relations.

Doxsee; Y.

536B North Africa Since 1914 (5)

Rise of nationalism; struggle for political independence; political, economic, and social problems in independent North Africa.

Doxsee; D.

538 History of West Africa (5)

History of West Africa from early times to present: peopling of sudanic and forest regions; development of trade; Islam and rise of sudanic empires; slave trade and forest states; colonial era; independence movements; problems of nationalism.

Booth; Y.

538A History of East Africa (5)

History of East Africa from early times to present, with emphasis on period since 1750. Although neighboring countries also studied, greatest attention paid to region which comprises present day Kenya, Uganda, and Tanzania.

Miers; Y.

541A Africa to the 17th Century (5)

Africa in ancient world; spread of agriculture and iron working; rise of Islam; migrations of peoples; developing of states; arrival of Europeans.

Miers; Y.

541B Africa from the 17th to the Late 19th Century (5)

Africa in 17th century; slave trade; religious revolutions in western Sudan; development of African states; commercial revolution of 19th century; birth of plural society in South Africa; European partition of Africa.

Miers; Y.

541C Africa from the Late 19th Century to the Present Day (5)

Establishment of European rule in Africa; colonial period; rise of nationalism; decolonization and independence; problems of modern Africa.

Miers; Y.

542 History of South Africa (5)

Ancient man; Bantu migrations; coming of Europeans; conflict between African, Boer, and Briton; rise of Zulus and Wars of Calamity; rise of colonial tensions and Boer War; the Union; rise of parties and Age of the Generals; WW I; industrial and social conflict; WW II; election of 1948 and emergence of Afrikaner nationalism; racial tensions of 1970s.

Booth; Y.

543 Revolutions In Southern Africa (5)

Historical background, and developments to present, of revolutions in Mozambique, Angola, Zimbabwe (Rhodesia), Namibia (South West Africa) and Azania (South Africa).

Booth; D.

544A History of the Malay World (5)

Political and cultural history of Malaysian and Indonesian peoples from early times through mid-20th century. Indigenous values and institutions. Roles of imperialism and revolution in modernization process down to present.

Frederick; D.

544B Burma and Thailand In Modern Times (5)

Comparative study of neighboring Buddhist states, their origins, their interrelations historically and culturally, varying impact of colonial period, and problems of post-war modernization.

Frederick; D.

544C History of Vietnam (5)

Assessment of impact of 1000 years of Chinese rule to 939, development and expansion of Vietnamese state to its decline in late

19th century, French colonial impact, achievement of independence by 1954, and relations of North and South in recent times.

Frederick; D.

544D Chinese in Southeast Asia (5)

Analytical survey of 2000 years of Chinese participation in affairs of Southeast Asia. Topics include Chinese role in Vietnam, Chinese imperialism in Southeast Asia, Tribute System, immigration of Chinese into area, their relationships with European colonial authorities and indigenous peoples, and 20th century political problems.

Jordan; D.

545A Southeast Asia to c. 1750: The Creative Synthesis (5)

Highlights of pre- and proto-history and development of classical states. Emphasis on cultural synthesis (Hindu, Buddhist, Muslim, and animist influences) and theme of change and continuity in both Great and Little traditions of region.

Frederick; Y.

545B Southeast Asia, c. 1750 to 1942: Change and Conflict (5)

Indigenous change and widening effects of western penetration, with emphasis on social and cultural developments. Nature of colonialism in region, and response of colonized seen in light of both traditional and modern influences.

Frederick; Y.

545C Southeast Asia, 1942 to the Present: The Search for Stability (5)

Japanese occupation and its relationship to great national revolutions of 1940s. Social and cultural contents of nationalism and revolt, search for new political forms, and struggle against disunity and poverty.

Frederick; Y.

546A Traditional China (5)

Historical overview of China's cultural development, including opposing schools of Taoism and Confucianism, fabulous artistic heritage, values of familism, and evolution of premodern world's largest government and its means of ruling world's largest society.

Jordan; D.

546B Modern China (5)

Survey of long traumatic road from China's weakness against western imperialism and dynamic modern forces in 1800s through reaction of Chinese intellectuals against long-held traditional ways, and ensuing nationalism and communism in 20th century. Mao's role in creation of new China reassessed and related to post-Mao Chinese goals and place in world.

Jordan; D.

548A Traditional Japan (5)

Development of Japan's early civilization including indigenous elements and those derived from Korea and China. Political development of Japan leading to its position vis-a-vis western nations in 19th century.

Jordan; D.

548B Modern Japan (5)

Political weakness of Tokugawa system leading to opening of Japan to western trade and restoration of emperor; favorable economic and political base which allowed Japan to enter successfully into competitions with European nations; Japan's ultranational era and post-war reconstruction.

Jordan; D.

551 Medieval People (5)

Inquiries in depth into lives and epochs of representative individuals of medieval Europe. Look at Middle Ages through biography.

Reeves; Y.

552 Medieval Civilization (5)

Transmission of Christianity and classical culture to barbarians and their work of combining the 2 into new civilization in early Middle Ages. Medieval civilization at its height: church, schools, and scholastic thought and secular culture.

Reeves; Y.

556A Italian Renaissance (5)

Major political, social, economic, and cultural currents of Italian city-states from 1150 to 1550. Focus on Dante, Petrarch, Boccaccio, Bruni, Machiavelli, Guicciardini, Michelangelo, Leonardo da Vinci, etc.

Bebb; Y.

556B Northern Renaissance (5)

History of Renaissance outside Italy: politics, economics, sociology, and intellectual currents of Germany, France, Spain, Burgundy,

and England from 1300 to 1600. Treated thematically, course focuses on Erasmus, More, Ximenes, Reuchlin, Hutten, Bude, etc.

Bebb; Y.

556C Reformation (5)

Protestant, Catholic, and Counter-Reformations in Europe, showing their relationship to social, political, economic, and religious movements of 15th and 16th centuries. Roles of Luther, Zwingli, Calvin, Cranmer, Erasmus, Loyola, etc.; Protestant and Catholic churches and sects in western and eastern Europe.

Bebb; Y.

557 Florentine People (5)

Major figures in Florence from 1300 to 1600, from Dante to Galileo. Concerns with some originators of modern thought in areas of artistic theory, poetic form, Italian language, political ideas, scientific method, and historical composition.

Bebb; D.

558A Early Modern Europe 1559-1648 (5)

Main political, economic, and social developments during Age of Spanish Hegemony: Habsburg power, wars of religion and ideological struggle, challenge of Bourbon France — Henry IV and Richelieu.

Baxter; Y.

558B Early Modern Europe, 1648-1715 (5)

Main political, economic, and social developments: rise of absolutism and France of Louis XIV, French hegemony and its challenges, society of hierarchy.

Baxter; Y.

558C Early Modern Europe, 1715-1774 (5)

Main political, economic, social, and intellectual developments: change from society of "estates" to that of class, New Husbandry, Industrial Revolution, rise of Prussia and Frederick the Great, balance of power, and Enlightenment and Enlightened Despots.

Baxter; Y.

560 Women in European History (5)

Women and family, women and work, women and feminism, women and male attitudes, and women and politics major topics of this introduction to women's history in France, England, Germany, and Russia from Renaissance to present, with emphasis on more recent developments. Since our own culture is an outgrowth of European, this course is indispensable to understanding of women's history in U.S.A.

Harvey; D.

562A Europe, 1814-1871 (5)

Europe from Congress of Vienna through Franco-Prussian War. Growth of liberalism and nationalism, revolutions of 1830 and 1848, Industrial Revolution, unification of Italy and Germany, social, and intellectual movements.

McGeoch; Y.

562B Europe, 1871-1914 (5)

Development of Austria-Hungary, France, Italy, Germany, Great Britain, and Russia including imperialism. Background of WW I and social and intellectual movements.

McGeoch; Y.

564A Europe between World Wars (5)

Fascism, communism, world depression, and 20-Year Armistice between 1919 and 1939; social, economic, and intellectual approach.

Whealey; Y.

564B Contemporary Europe (5)

Europe since 1945: postwar settlement, Cold War, E.E.C.; survey of developments in Britain, France, Italy, West Germany, and some smaller countries.

Gustavson; Y.

565 Spain and Portugal Since 1898 (5)

Survey of political, social, economic, diplomatic, and ideological trends.

Whealey; D.

566A Modern France in the 19th Century (5)

Rise and fall of Emperor; his impact on France and Europe; monarchist interlude; revolution of 1848 and election of Louis Napoleon; Second Empire, liberal and authoritarian; wars and transformation of Europe; fall of Napoleon and Paris Commune; Third Republic.

Chastain; Y.

566B Modern France in the 20th Century (5)

Dynamic and stagnant aspects; nostalgia and rejection of 20th century; impact of 20th century; democracy in France; European

and colonial wars; communist movement from Popular Front to Common Program; anti-communism in France; French in changing world; De Gaulle, his predecessors, and his successors.

Chastain; Y.

568A Modern Germany in the 19th Century (5)

Cosmopolitanism and movement to create national German state; rise of capitalism and decline of handicraft; liberation of German peasantry; revolution of 1848 and reaction; blood and iron chancellor; Germany's rise to European predominance; rise of worker movement; German society at turn of century.

Chastain, Gustavson; Y.

568B Modern Germany in the 20th Century (5)

Germany on eve of WW I; military fiasco and creation of Weimar Republic; Weimar, Berlin, Munich, and Dresden; attempt to forge democracy; Third Reich and transformation of German society; WW II and Final Solution; Communist Germany and Federal Germany: 2 societies and 2 states since 1945.

Chastain; Y.

570 History of the Byzantine Empire 324-1453 (5)

Decay of Roman world and emergence of Christian Empire, 324-717; Medieval Roman Empire, 717-1056; weakening of Central Administration and apparent revival under Comneni, 1025-1204; Byzantium and neighboring world, 1204-1453; church and state; education and learning; Byzantine art; social, political and military developments.

Kaldis; Y.

572A Balkans in Early Modern Period, 1453-1804 (5)

Ethnographic structure of Balkan peoples under rule of Ottoman Empire. Ottoman institutions and society; political, social, economic, religious, and cultural developments in Balkans in 15th, 16th, 17th, and 18th centuries.

Kaldis; Y.

572B Balkans in 19th Century, 1804-1878 (5)

Evolution of modern Balkan nationalism and rise of Balkan states. Ottoman dissolution and Balkan revolutionary nationalism; political, social, economic, religious, and intellectual developments; domestic Balkan policy and foreign intervention.

Kaldis; Y.

572C Balkans in 20th Century, 1878 to Present (5)

Historical, cultural, and ethnic background of Balkan peoples. Social, economic, political, and intellectual developments in Balkans; communication of southeast European states.

Kaldis; Y.

574A Balance of Power: Napoleon to the Kaiser (5)

Diplomatic history from Congress of Vienna to WW I. Age of Metternich, Italian and German unification, new imperialism, and pre-war alliances and alignments.

McGeoch; Y.

574B History of International Diplomacy, 1914-1939 (5)

International problems of peace and war, international organization and alliances.

Whealey; Y.

574C History of International Diplomacy, 1939 to Present (5)

International problems of peace and war on worldwide scale since 1939, international organization and alliances, adjustment to collapse of European imperialism.

Whealey; Y.

576 Biography: Leaders in 19th Century Europe (5)

Lives of great and near-great in 19th Century Europe.

McGeoch; D.

579 The Development of Modern Science (5)

Survey of development of science from Renaissance. History of physical and natural sciences in ages of Copernicus, Newton, Linnaeus, and Darwin.

Rauschenburg; D.

582A History of Russia (5)

Russia from earliest times to 1881. Kievan Russia, Muscovy, emergence of Tsarist Russia. Territorial expansion and role as great power in Europe and Asia.

Gustavson; Y.

582B The Communist Revolution (5)

Tsarist Russia to Soviet Union, 1881-1924; background for revolution. Bolshevik seizure of power and consolidation of dictatorship.

Gustavson; Y.

582C Soviet Union (5)

Soviet Union since death of Lenin (1924); internal affairs of Communist regime.

Gustavson; Y.

589 Later Medieval England, 1307-1485 (5)

Comprehensive examination of political, social, intellectual, ecclesiastical, and economic aspects of period.

Reeves; D.

590A Tudor England (5)

England in 16th century. Tudor politics, English Reformation and major cultural and economic developments of Shakespeare's England.

Harvey; Y.

590B Stuart England (5)

England in 17th century. Constitutional crisis of Stuart period, civil war and revolution, and major cultural and economic developments, including attention to folk culture.

Harvey; Y.

591A English History to 1688 (5)

Stresses institutional aspects of medieval England and social, political, and constitutional developments in Tudor and Stuart periods.

Rauschenberg; Y.

591B English History Since 1688 (5)

Emphasizes cultural and economic developments, growth of British Empire, constitutional and social reforms, and impact of WW I and WW II.

Rauschenberg; Y.

592A Georgian England (5)

Political, social, intellectual, cultural, and economic developments of England in yrs prior to and during American and French revolutions.

Rauschenberg; Y.

592B Victorian England (5)

England from 1815 to 1900; with primary focus on political and economic developments that produced democratization of British life.

Rauschenberg, Richter; Y.

592C 20th Century England (5)

England from 1900 to present: beginning of welfare state, WW I, 1920s, Great Depression, road to WW II, and postwar welfare state.

Rauschenberg; Y.

594A The Medieval English Constitution (5)

English government from Anglo-Saxon times to end of Middle Ages. Growth of machinery of monarchy, central administration, courts, and common law. Rise of Parliament.

Reeves, D.

594B The Modern English Constitution (5)

Emergence of modern English constitution during 16th and 17th centuries: creation and growth of Tudor Constitution; significance of English Reformation for constitution; Tudor Parliament; "Century of Revolution" (1603-1689) and crisis of constitution; problems of sovereignty and obligation; constitution today.

Harvey; D.

595 History of Canada (5)

Introduction to Canada: its exploration and development under France and England, and its emergence as important modern nation.

Rauschenberg, D.

597A Representative Historians and Their Writings: American History Emphasis (5)

Readings in historical logic and method. Development of historical profession in U.S. from early times to present as phase of American social and intellectual history. In-depth consideration of important writers of American history and major schools of interpretation.

Hamby, A.

597B Representative Historians and Their Writings: European History Emphasis (5)

Typical historians from time of Herodotus. Readings from their masterpieces to illustrate schools of interpretation, philosophies of history, and development of historical writing. Noteworthy historians in European history.

Kaldis, Y.

598A Problems in History (American) (1-6)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff members.

Staff; Y.

598B Problems in History (European) (1-6)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff members.

Staff; Y.

598C Problems in History (World) (1-6)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff members.

Staff; Y.

598D Problems in History (General) (1-6)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff members.

Staff; Y.

600/800 Seminar: Colonial and Revolutionary America (10)

Prereq: grad rank. Readings and research in U.S. history prior to 1789. Presented in 2-qr sequence. No credit granted until 2nd qr is completed.

Steiner; D.

601A/801A Colloquium in Colonial American History (5)

Literature and source materials; readings and reports.

Steiner; D.

601B/801B Colloquium in the Era of the American Revolution (5)

Literature and source materials; readings and reports.

Steiner; D.

605/805 Colloquium in Foundation of the American Republic, 1783-1819 (5)

Literature and source materials in field of early national period of American history; readings and reports.

Staff; D.

607/807 Colloquium in Era of Sectional Controversy, 1819-1850 (5)

Literature and source materials; readings and reports.

Field; D.

608/808 Seminar in United States History, 1850-1900 (10)

Prereq: grad rank. Selected topics in political history of U.S. in late 19th century. Presented in 2-qr sequence. No credit granted until 2nd qr completed.

Field; D.

609/809 Colloquium in Era of Foundations of Modern America, 1850-1900 (5)

Literature and source materials; readings and reports.

Field; D.

610/810 Seminar in 20th Century United States History (10)

Presented in 2-qr sequence. No credit granted until 2nd qr completed.

Hamby, Lobdell; A.

611/811 Colloquium in History of the United States in Recent Times (5)

Literature and source materials; readings and reports.

Hamby, Lobdell; A.

614/814 Seminar in the Social, Intellectual, and Cultural History of the United States (10)

Presented in 2-qr sequence. No credit granted until 2nd qr completed.

Daniel, Alexander; A.

615/815 Colloquium in Social, Cultural, and Intellectual History of the United States (5)

Literature and source materials; readings and reports.

Daniel, Alexander; D.

616/816 Seminar in History of United States Foreign Relations (10)

Presented in 2-qr sequence. No credit granted until 2nd qr completed.

Gaddis, D.

617/817 Colloquium in History of American Foreign Relations (5)

Literature and source materials; readings and reports.

Gaddis, D.

- 621/821 Colloquium in Regional United States History (5)**
Literature and source materials; readings and reports.
Staff; D.
- 623/823 Colloquium in Latin American History, 1750-1880 (5)**
Literature and source materials; readings and reports.
Grow; D.
- 627/827 Colloquium in Recent Latin American History (5)**
Literature and source materials; readings and reports.
Grow; D.
- 629/829 Colloquium in History of Ancient Greece (5)**
Literature and source material of ancient Greek civilization. Themes vary from yr to yr. May be repeated for credit.
Richter; D.
- 635/835 Colloquium in Middle East History (5)**
Literature and source materials on Middle East since 1914; readings and reports.
Doxsee; D.
- 640/840 Seminar in African History (10)**
Presented in 2-qr sequence. No credit granted until 2nd qtr completed.
Booth, Miers; Y.
- 641/841 Colloquium in African History (5)**
Literature and source materials; readings and reports.
Booth, Miers; D.
- 644/844 Seminar: Southeast Asia (10)**
Presented in 2-qr sequence. No credit granted until 2nd qtr completed.
Frederick; D.
- 645/845 Colloquium in History of Southeast Asia (5)**
Literature of Southeast Asian history, general culture, developments in 19th and 20th centuries; readings and reports.
Frederick; D.
- 646/846 Seminar: East Asia History (10)**
Presented in 2-qr sequence. No credit granted until 2nd qtr completed.
Jordan; D.
- 649/849 Colloquium in History of East Asia in Modern Times (5)**
Historical literature relating to process of modernization of China and Japan from 1860s to 1980s. Readings and reports.
Jordan; D.
- 657 Seminar in Renaissance-Reformation (10)**
Prereq: grad rank. Presented in 2-qr sequence. No credit granted until 2nd qtr completed.
Bebb; D.
- 661 Colloquium in French Revolution (5)**
French Revolution as prototype of revolutions: background, immediate causes, pattern of development, role of ideas and individuals in great social upheaval.
Gustavson; D.
- 662/862 Seminar in 19th Century European History (10)**
Presented in 2-qr sequence. No credit granted until 2nd qtr completed.
McGeoch, Chastain; A.
- 663/863 Colloquium in 19th Century Europe (5)**
Literature and source materials; readings and reports.
McGeoch; D.
- 664 Seminar in 20th Century European History (10)**
Presented in 2-qr sequence. No credit granted until 2nd qtr completed.
Gustavson, Whealey; A.
- 667/867 Colloquium in Modern France (5)**
Literature and source materials; readings and reports.
Chastain; D.
- 674/874 Seminar in European Diplomacy Since 1815 (10)**
Presented in 2-qr sequence. No credit granted until 2nd qtr completed.
Whealey, McGeoch; D.
- 683/883 Colloquium in Russian and Soviet History (5)**
Literature and source materials; readings and reports.
Gustavson; D.

- 691/891 Colloquium in English History to 1714 (5)**
Early modern English history from multi-disciplinary perspectives.
Harvey; D.
- 693/893 Colloquium in British History Since 1714 (5)**
Literature and source materials; readings and reports.
Rauschenberg; D.
- 695 Thesis (as recommended by dept)**
Staff; Y.
- 696/896 Quantitative Methods in History (5)**
Prereq: grad rank or consent. Introduction to descriptive and inductive statistical techniques used in historical research and analysis of current literature employing such techniques. Instruction in use of computer included.
Field; D.
- 894 Independent Study (1-16)**
Prereq: Eligibility determined by grad faculty.
Staff; Y.
- 895 Dissertation (as recommended by dept)**
Staff; Y.

HOME ECONOMICS

General Home Economics Child Development and Family Life Foods and Nutrition Home Economics Education Textiles and Clothing

The School of Home Economics offers graduate programs leading to the master of science degree in child development and family life, foods and nutrition, home economics education, and textiles and clothing.

A prospective graduate student should have a minimum of 20 quarter hours of undergraduate preparation in the field of home economics in which he or she wishes to specialize or in approved related fields or both. For a student majoring in home economics education, a minimum of 24 quarter hours of undergraduate credit distributed among at least three areas of home economics is required. Deficiencies may be made up during the first quarter of study.

A student may take 12 to 18 hours of work in an area of home economics other than his or her major area, or in approved related fields.

All graduate programs in home economics are planned by the student and his or her advisor, taking into consideration the undergraduate training and the professional goals of the student. Requirements vary, depending upon the type of program selected.

A student holding a bachelor's degree from an accredited college or university, who has attained an undergraduate scholastic point-hour ratio of 2.7 ($A = 4.0$) on hours attempted, and a 3.0 in the last 90 hours of coursework will be considered for admission with regular graduate status. Further supporting evidence of the student's ability in the form of letters of recommendation and letters of intent are required.

Applicants not meeting the above requirements may be considered for admission if they achieve designated scores on the Graduate Record Examination or the Miller Analogies Test.

It is recommended that both applications for admission and for financial aid for the following academic year be received by April 1.

General Home Economics

- 579A Workshop in Home Economics (1-6)**
Prereq: teaching experience or perm. Special workshops for in-service training of home economics teachers. 579A — home economics education.
Staff; Su; D.

579B Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579B — clothing and textiles.

Staff, Su, D.

579C Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579C — food and nutrition.

Staff, Su, D.

579D Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579D — child development.

Staff, Su, D.

579E Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579E — consumer economics.

Staff, Su, D.

579F Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579F — home furnishings.

Staff, Su, D.

579G Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579G — home management.

Staff, Su, D.

579H Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579H — household equipment.

Staff, Su, D.

579I Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579I — school lunch management.

Staff, Su, D.

579J Workshop in Home Economics (1-6)

Prereq: teaching experience or perm. Continuation of series beginning with 579A. See 579A for general description. 579J — family life education.

Staff, Su, D.

590A Independent Study (1-5, max 15)

Prereq: perm. Independent study, advanced level under direction of faculty member in area of specialization. 590A — consumer service and education.

Staff, D.

590B Independent Study (1-5, max 15)

Prereq: perm. See 590A for general description. 590B — human development and family ecology.

Staff, D.

590C Independent Study (1-5, max 15)

Prereq: perm. See 590A for general description. 590C — human environment and design.

Staff, D.

590D Independent Study (1-5, max 15)

Prereq: perm. See 590A for general description. 590D — human nutrition and food science.

Staff, D.

659A Home Economics Seminar, Workshop or Short Course in International Service (2-4)

Prereq: perm. Special seminars or workshops for international students or for home economics majors who want to prepare for international service. Lec, lab, and field trips. 659A — world food supply and human nutrition.

Staff, D.

691A Seminar or Short Course in Home Economics (2-4)
Prereq: perm of dept chairman. Research and recent developments in child development and family life.

Staff, F, W, Sp, Su, D.

691B Seminar or Short Course in Home Economics (2-4)

Prereq: perm of dept chairman. Continuation of series beginning

with 691A. See 691A for general description. 691B — foods and nutrition.

Staff, F, W, Sp, Su, D.

691C Seminar or Short Course in Home Economics (2-4)

Prereq: perm of dept chairman. Continuation of series beginning with 691A. See 691A for general description. 691C — home economics education.

Staff, F, W, Sp, Su, D.

691D Seminar or Short Course in Home Economics (2-4)

Prereq: perm of dept chairman. Continuation of series beginning with 691A. See 691A for general description. 691D — housing management.

Staff, F, W, Sp, Su, D.

691E Seminar or Short Course in Home Economics (2-4)

Prereq: perm of dept chairman. Continuation of series beginning with 691A. See 691A for general description. 691E — textiles and clothing.

Staff, F, W, Sp, Su, D.

691F Seminar or Short Course in Home Economics (2-4)

Prereq: perm of dept chairman. Continuation of series beginning with 691A. See 691A for general description. 691F — research.

Staff, F, W, Sp, Su, D.

692 Research (2-4, max 8)

Prereq: perm. Independent investigation in one area of home economics.

Staff, F, W, Sp, Su, Y.

695 Thesis (2-10)

Prereq: approval by chairman of dept in which work is performed.

Staff, F, W, Sp, Su, Y.

Child Development and Family Life

562A Pluralistic Life Styles (2)

Prereq: grad rank or perm. Analysis of emerging pluralistic marriage and family life patterns in American society.

Stricklin, Y.

562B Parenthood (2)

Prereq: grad rank, perm. Analysis of dynamics of parenthood.

Stricklin, Y.

562C Middle Childhood (2)

Prereq: grad rank, perm. Interpretation of developmental tasks of middle childhood yrs as they reflect and influence family guidance and transmission of values.

Stricklin, Y.

562D The One-Parent Family (2)

Prereq: grad rank or perm. Analysis of dynamics of 1-parent family in light of its needs, challenges, and distinctive characteristics.

Stricklin, Y.

562E Youth Identity Crisis (2)

Prereq: grad rank, perm. Analysis of identity crisis in terms of its psychological aspects of adolescence.

Stricklin, Y.

562F The Aged Family (2)

Prereq: grad rank or perm. Synthesis of multiple dimensions of aged family.

Stricklin, Y.

563 Preschool Administration (5)

Prereq: perm. Problems in organizing and administering preschools, play groups, and Head Start programs. Field trips.

King, Sp, Y.

565 Parent Education (4)

Prereq: 562. Supervised experience in organizing, formulating, conducting, and evaluating discussion groups, classes, programs, and individual conferences for parents and youth leaders. 1 qtr advanced registration with dept of child development and family life required.

Nehls, Sp, Y.

571 Family Life Education (4)

Prereq: perm. Selected fundamental educational problems explored. Examination of various dimensions of teacher's role and critical appraisal of student's professional competency to teach classes in family relations. Field trips to selected family life education programs.

Staff, W, D.

664 Advanced Child Development (5)

Prereq: perm. Theories and principles of child development as advanced by various disciplines. Field work, including independent project.

Stricklin; F; D.

672 Special Studies in Human Development (2-5)

Prereq: 562. In-depth study in selected area.

Nehls; F, W, Sp, Su; D.

674 Advanced Family Development (5)

Prereq: 562. Specific conceptual schemes of major theorists in various areas of home economics relative to broad issues of philosophy and values. Consideration of differential amenability of various areas in procedures to problems of family development.

Stricklin; Sp; Y.

675 Introduction to Principles of Family Consulting (4)

Prereq: 674 or perm. Development of operational definitions, theoretical formulations, and illustrations applicable to its uniqueness.

Stricklin; D.

679 Special Studies in Family Relations (2-5)

Prereq: 562. In-depth study in selected area.

Stricklin; F, W, Sp, Su; D.

Foods and Nutrition

522 Experimental Foods (4)

Factors which affect results of different methods used in food preparation. Research techniques using subjective and objective evaluation. 3 lec, 2 lab.

Mugwira; Sp.

523 Food Preservation (3)

Principles of food preservation on factors affecting palatability and nutritive value of foods; comparative studies of products.

Yugas; Sp; A.

525 Readings in Foods and Nutrition (2-4, max 8)

Critical review of current literature with emphasis on modern theory and practice in nutrition and food preparation.

Staff; D.

526 World View of Nutrition (3)

Prereq: perm. Survey of world food situation, with consideration of environmental, cultural, governmental, and economic factors that relate to food production and consumption. Evaluation of effects of these factors in meeting dietary needs.

Sullivan; W.

528 Advanced Nutrition (4)

Prereq: perm. Biochemical and physiological processes in nourishment of body. Determination of nutrient needs and evaluation of nutritional status. Animal feeding experiments.

Sullivan; F.

529 Community Nutrition (3)

Prereq: perm.

Sullivan; Sp.

530 Therapeutic Nutrition (4)

Prereq: perm. Use of dietary modification in prevention and treatment of disease. Nutritional assessment. Problems in nutritional care.

Sullivan; W.

531 Studies in the Science of Nutrition (3-4, max 8)

Nutrition as related to physiological and metabolic processes. Individual research project.

Staff; D.

537 Food Service Systems I (4)

Prereq: perm. Introduction to tools and functions of management in food service with emphasis on organizational structure, menu planning, staffing, work methods, human relations skills, sanitation, and safety. 4 lec, lab arr.

Mugwira; F; A.

538 Food Service Systems II (4)

Prereq: 537. Institutional food purchasing, kitchen layout design, equipment selection, and cost control. 4 lec, lab arr.

Mugwira; W; A.

624 Advanced Food Science (3-4)

Prereq: perm. Chemical and physical behavior of basic food con-

stituents and their influence on characteristics and nutritive value of foods.

Staff; D.

626 Methods of Food and Nutrition Investigation (3-4, max 8)

Prereq: 531 or 624. Biological and chemical methods used for analysis of various nutrients and constituents in foods and biological materials. Nutrition research using human subjects or food technology.

Staff; D.

627 Studies in Foods and Nutrition (3-5, max 10)

Prereq: 522 or 531. Intensive study of selected topic in foods or nutrition. May include lab work.

Staff; D.

Home Economics Education

543 Vocational Home Economics (4)

Prereq: teaching experience in home economics. History and philosophy of vocational home economics education. Contemporary trends, methods, sources of materials, and evaluation. Observation arranged.

Slater; Su; Y.

544 Home Economics in Adult Education (4)

Prereq: perm. Organization procedures, curriculum materials, and methods of conducting adult education in various settings.

Varner; W; Y.

545 Current Developments in Home Economics Education (4)

Prereq: perm. Trends and developments in home economics at all levels including topics such as curricular developments, evaluation procedures, legislation affecting programs, and research.

Slater; Su; Y.

550 Problems in Teaching Home Economics (2-4, max 6)

Prereq: teaching experience. Individual problems.

Slater, Varner; F, W, Sp, Su; D.

552 Home Management for the Disabled Homemaker (4)

Home management problems faced by disabled individuals and creative methods and materials to use in solving those problems.

Varner; Y.

553 Functional Assessment in Independent Living (3)

Identification of the functional limitations experienced by disabled clients in completing household tasks, methods for assessing functional limitations, and creative strategies and resources to increase functioning in the performance of household tasks.

Varner; Y.

592 Household Equipment Techniques (5)

Prereq: perm. Critical analysis of home equipment relative to durability and effective use. 1 lec, 4 lab.

Staff; W; D.

595 Advanced Home Management (3)

Prereq: perm. Over-all view of home management; development of present principles and concepts; contributions of other disciplines to home management.

Varner; D.

639 Studies in Household Equipment and/or Management (2-4, max 8)

Prereq: perm. Individual study in selected area of home management and/or household equipment under supervision.

Varner; D.

640 Supervision in Home Economics (4)

Prereq: teaching experience in home economics. Leadership functions, principles, and practices involved in effective supervision in home economics. For those interested in supervising student teachers or in-service programs at local, state, or national level.

Cibrowski; Sp; Y.

646 Home Economics in Higher Education (4)

Prereq: perm. Basic philosophy and issues concerning place of home economics in higher education today. General trends in curriculum offering, teaching practices, evaluation, administration, and research. For those interested in home economics at college level.

Slater; F.

- 650 Studies in Home Economics Education (2-4, max 8)**
Prereq: teaching experience in home economics. Intensive study of some phase of home economics education.
Slater, Varner; F, W, Sp, Su; D.

Textiles and Clothing

- 505A History of Costume (4)**
Clothing through the ages as reflection of historical period and source for present-day design.
Staff; Y.
- 505B History of Textiles (2)**
Textiles through the ages as reflection of historical period and source for present-day design.
Staff; Y.
- 507 Textile and Fashion Industry (4)**
Prereq: perm. Problems confronting buyer of textile products as related to specific manufacturing situations involved.
Staff; W; Y.
- 515 Design Analysis: Flat Pattern (4)**
Prereq: perm. Emphasis on fitting techniques. Use and understanding of commercial patterns. 2 lec, 4 lab.
Staff; F, W, Sp; Y.
- 517 Readings in Textiles and/or Clothing (2-4, max 8)**
Prereq: perm. Analysis and interpretation of current writings and research with emphasis on new developments and trends.
Staff; F, W, Sp, Su; D.
- 518 Quality Control (4)**
Prereq: CHEM 123, HETC 315, or perm. Principles, techniques, and standard testing methods of quality control for textiles, clothing, and interior design. Lab sessions will emphasize standard textile testing procedures and research methods. Federal and state laws and codes designed to protect consumer also discussed.
Staff; Y.
- 519 Studies in Textile Testing (3)**
Prereq: perm. Individual research and lab testing of problems in advanced textiles.
Staff; Y.
- 554 Clothing for Persons with Special Needs (3)**
Various dressing techniques and functional design alternatives available to increase independence of individuals with special needs. Focus is given to populations such as the elderly, mentally disabled, and temporarily or permanently physically disabled.
Gainer; Y.
- 580 History of Furniture (3-4)**
Prereq: perm. Styles of furniture and furnishings. Emphasis on periods of past and their esthetic influence on present. Practical projects in designing and furnishing homes.
Langford; F, W; Y.
- 581 Contemporary Design in Furnishings (3)**
Prereq: perm. Furnishings and interiors of present era; factors that have influenced development of contemporary design; important designers and their work.
Langford, Sp; Y.
- 582 Design in Home Accessories (3)**
Prereq: perm. Esthetic study of development of design in accessories of glass, pottery, oriental rugs, metal such as silver and pewter. Use of accessories in home and in displays.
Matthews; W, Y.
- 609 Psychological, Social, and Economic Aspects of Clothing (4)**
Prereq: perm. Contemporary uses and roles of textiles and clothing as affected by economic, social, and psychological forces seen in historic perspective.
Staff; D.
- 612 Advanced Studies in Clothing (2-4)**
Prereq: perm. Advanced problems and techniques in clothing construction. Emphasis on scientific principles of construction and experimental methods and fabrics. 3 lec, 3 lab
Staff; D.
- 615 Advanced Studies in Textiles (2-4)**
Prereq: perm. Physical and chemical examination of fibers and fabrics with emphasis on application of testing techniques as applied to individual textile studies. 1 lec, lab hrs arranged
Staff; D.

INDIVIDUAL INTERDISCIPLINARY PROGRAMS

A graduate student with demonstrated ability and intellectual maturity may apply for admission into the Individual Interdisciplinary Program at either the master's or doctor's level. Entry into the program requires *unconditional* admission to graduate study. Applicants should have achieved at least a 3.3 undergraduate grade-point average to pursue a master's degree in I.I.P., and/or a 3.6 graduate grade-point average to pursue the Ph.D. degree in I.I.P. The I.I.P. requires that the student, with the assistance of his or her advisory committee, develop a program of study that includes a *minimum* of three emphasis areas, each in a different department or school. At least two of the departments or schools must offer graduate degrees at the level sought by the student.

At the master's level, the minimum requirements include 15 hours of graded course credit in each area of emphasis, plus a final project (thesis, performance, etc.) acceptable to the student's advisory committee.

At the Ph.D. level, no fixed minimum of graded course credit is imposed beyond that associated with the residency requirement (three consecutive quarters in a full-time equivalent status); however, a practical minimum in terms of hours of graded course credit is 135 beyond the bachelor's degree, or 90 beyond the master's degree.

The I.I.P. is administered through the Office of the Associate Provost for Graduate and Research Programs; inquiries should be addressed to that office. Upon receipt of the inquiry, appropriate application forms will be returned to the applicant. In addition to the standard application forms, each applicant is required to submit the following:

(1) A statement (not to exceed two pages) describing the applicant's goal and rationale for pursuing an I.I.P. degree, *including the reasons why the degree goal is not available through an existing advanced degree program at Ohio University*. This procedure requires that the applicant be familiar with the possibilities described in the current *Ohio University Bulletin, Graduate Catalog*.

(2) A tentative plan of study (GC Form 1078 provided with the application package). After all application documents are received, the I.I.P. coordinator determines whether or not: (1) the student's qualifications are minimally acceptable, (2) the University's capabilities and the student's goals are compatible, and (3) the proposed program is unavailable in an existing format in an existing academic unit.

If these requirements are satisfied, the credentials are forwarded to the persons chairing the graduate committees of the departments or schools involved, for evaluation and recommendations from qualified faculty. If the recommendations are positive, the student is admitted to the program, and an advisory committee is appointed from the appropriate disciplines. The committee is responsible for preparing the program requirements, periodically reviewing the student's progress, administering comprehensive examinations, and directing the final project or dissertation.

INDONESIAN

(See Foreign Languages and Literatures)

INDUSTRIAL AND SYSTEMS ENGINEERING

(See Engineering, Industrial and Systems)

INDUSTRIAL TECHNOLOGY EDUCATION

Master's degree programs in industrial technology education are offered with thesis and nonthesis options through the College of Education. Related courses from other areas of the University

are normally specified within each program, as approved by the major advisor and the departmental graduate committee.

Potential graduate students are expected to have previous undergraduate preparation of at least 36 quarter hours in technically oriented courses. Conditional admission may be granted, subject to early completion of specified undergraduate courses, concurrent with beginning graduate studies.

First registration in 681 — Research should be during the first or second quarter of study. Recommendation from the departmental graduate committee concerning selection between thesis and nonthesis plans will be given, as based upon the proposal submitted during this course.

Qualified students may apply for admission for any quarter through the College of Education.

526 History and Philosophy (3)

Historical development of industrial education, including philosophy and people associated with various stages of program evolution. 3 lec.

Staff; F, W, Sp, Su; D.

527 Current Trends (3)

Identification and study of changing patterns as means of prediction and guidance for potential responsibility. 3 lec.

Staff; F, W, Sp, Su; D.

550 Advanced Work in Technical Areas (3-9)

Extension of capability in technical activity beyond level of basic competence. May be repeated in different areas for maximum credit of 9 hrs. 6 lab.

Staff; F, W, Sp, Su; D.

557 Program Planning (3)

Curricular development in technical education directed toward specifically identified situations. 3 lec.

Staff; F, W, Sp, Su; D.

561 Instructional Aids (3)

Construction of aids planned to improve efficiency of teaching process. 6 lab.

Staff; F, W, Sp, Su; D.

562 Programmed Instruction (5)

Existing instructional programming; development of new programmed materials. 2 lec, 6 lab.

Staff; F, W, Sp, Su; D.

565A Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565A: electricity.

Staff; Su; D.

565B Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565B: electronics.

Staff; Su; D.

565C Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565C: metals.

Staff; Su; D.

565D Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565D: woods.

Staff; Su; D.

565E Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565E: plastics.

Staff; Su; D.

565F Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565F: graphic arts.

Staff; Su; D.

565G Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565G: pneumatics.

Staff; Su; D.

565H Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565H: hydraulics.

Staff; Su; D.

565I Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565I: power.

Staff; Su; D.

565J Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565J: crafts.

Staff; Su; D.

565K Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565K: elementary industrial arts.

Staff; Su; D.

565L Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565L: administration and supervision.

Staff; Su; D.

565M Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565M: curriculum development.

Staff; Su; D.

565N Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565N: planning and design of industrial arts facilities.

Staff; Su; D.

565O Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565O: innovative programs.

Staff; Su; D; 1977.

565P Workshop in Industrial Education (1-6)

Prereq: teaching experience. Special workshop for in-service industrial arts teachers. 565P: ceramics.

Staff; Su; D.

571 Administration and Supervision (3)

Analysis of role of supervisor at various levels under conditions of currently developing programs; development of principles and practices most effective toward success of supervisor. 3 lec.

Staff; F, W, Sp, Su; D.

590 Special Problems (3-5)

Individual experimentation and research of professional problem. Identification of problems and planning effective attack toward potential solution.

Staff; F, W, Sp, Su; D.

591 Reading in Technology (3, max 9)

Required of all full-time majors when enrolled during fall, winter, or spring qtr. Core subject, or guided reading, chosen in consultation with major advisor during 1st wk of term. This may not be in area of current research or other course enrollment. Written abstracts of readings presented wkly.

Staff; F, W, Sp, Su; D.

681 Research (3-9)

First enrollment is for purpose of selecting and planning potential graduate research. Plan must be approved by graduate committee before the project is conducted. Campus registration required during term that final report is being prepared.

Staff; F, W, Sp, Su; D.

691 Seminar (3-9)

Topics to be announced. Reenrollment permitted when topics are changed.

Staff; F, W, Sp, Su; D.

695 Thesis (3-6)

Staff; F, W, Sp, Su; D.

INTERNATIONAL AFFAIRS

The Center for International Studies offers an interdisciplinary master of arts degree in international affairs. The student may concentrate on the culture, the institutions, and one of the languages of a major world region such as Africa, Southeast Asia, or Latin America, or may develop a program of courses focusing on international themes or institutions, such as Development Studies or International Administration. The M.A.I.A. degree is intended to give the individual freedom to develop a program best suited to his or her academic and professional requirements within an international or cross-cultural context.

Students are required to complete a minimum of 45 quarter hours in courses selected from at least three disciplines (anthropology, art history, business administration, communication, economics, education, geography, history, literature, philosophy,

political science, or sociology) and a two-hour introduction to graduate international studies. A minimum of two classes must be in seminar work or courses that satisfy seminar requirements.

Students are required to demonstrate an acceptable level of achievement in a language other than English pertaining to the area of concentration. This may be accomplished in the following ways: (1) For non-European languages, either (a) complete satisfactorily a minimum of one academic year (generally nine credit hours) in one of the following languages currently taught at Ohio University: Chinese (Mandarin), Indonesian Malay, or Swahili or (b) Take an examination in a language not taught at Ohio University or demonstrate an acceptable level of achievement in an examination administered by other recognized testing agencies. (2) For students offering a European language, an intermediate level is required for the degree.

A thesis may be written, but it is not required. The number of credits granted for the thesis (to a maximum of ten) will be determined by the student's advisory committee.

The criteria for admission are a baccalaureate degree from an accredited college or university; a good undergraduate record, usually including a minimum 3.0 average in the undergraduate major; and three letters of recommendation. The letters, usually from faculty with whom courses have been taken or from supervisors, should deal with the applicant's motivation, intellectual and academic capacity and potential, and work experience.

The Center for International Studies is responsible for the following courses:

500 Introduction to Graduate Studies (2)

Interdisciplinary introduction to graduate study including research methodologies and nature of area studies.

Staff; F, Sp; Y; 1982.

601 Seminar in Development (4)

Interdisciplinary investigation into selected problems of development. Intended to provide interdisciplinary perspective into nature of sociological, political, economic, and psychological change in Africa, Asia, and Latin America.

Staff; W; D; 1982

610A,B,C Seminar in Area Studies (4-5)

Selected multidisciplinary topics in African, Latin American, or Southeast Asian studies.

Staff.

690 Independent Study (1-5)

Prereq: perm.

Staff

695 Thesis (1-10)

Prereq: perm.

Staff, F, W, Sp, Su, D.

Below is a list of principal courses relevant to international studies. The individual programs (African, Development, International Administration, Latin American, and Southeast Asian) utilize particular courses from this list. The descriptions of the courses below are listed under the various departments.

African and Asian Languages

- 540 Traditional Literature of Southeast Asia
- 545 Modern Literature of Southeast Asia
- 571-2-3 Elementary Chinese
- 571-2-3 Elementary Indonesian
- 571-2-3 Elementary Swahili
- 574-5-6 Intermediate Chinese
- 574-5-6 Intermediate Indonesian
- 574-5-6 Intermediate Swahili
- 577-8-9 Advanced Chinese
- 577-8-9 Advanced Indonesian
- 577-8-9 Advanced Swahili

Anthropology

- 550 Economic Anthropology
- 551 Political Anthropology
- 557 Anthropology of Religion
- 558 Women: A Cross-Cultural Survey
- 566 Cultures of the Americas
- 571 Ethnology
- 575 Culture and Personality
- 576 Culture Contact and Change
- 577 Peasant Communities
- 578 Cultural Ecology
- 581 Cultures of Sub-Saharan Africa
- 585 Cultures of Southeast Asia
- 586 Problems in Southeast Asian Anthropology

Art History

- 530 The Arts of the Orient
- 531 Pre-Columbian Art
- 532 African Art
- 533 Near Eastern Art

Business Administration

- 510 Production Management
- 545 Small Business Administration
- 585 International Business

Economics

- 501 Statistical Foundations
- 510 Urban Economics
- 512 Economics of Poverty
- 513 Economics of the Environment
- 515 Economics of Health Care
- 522 Economics of Human Resources
- 530 Public Finance
- 531 Economics of Transportation
- 535 Economics of Energy
- 540 International Economics
- 541 International Economic Policy
- 550 Economic Development
- 551 Agricultural Development
- 554 Latin American Economic History
- 555 African Economic Development
- 570 Comparative Economic Systems
- 571 Economics of Planning
- 573 Economics of Southeast Asia

Education

- 504 Social Structure and Change in Education
- 505 Comparative Cultures and Education
- 506A Education and Development in Africa
- 506B Education and Development in Asia
- 506C Education and Development in Latin America
- 507 Program in International Education
- 508 Perspectives in International Education
- 550 Teaching Strategies for Cultural and International Understanding

Education Administration

- 601 Introduction to Educational Administration
- 631 Personnel Administration in Education
- 742 Planning Educational Facilities
- 784 Educational Planning and Evaluation

Educational Research and Evaluation

- 720 Educational Statistics I
- 731 Computer Science Application on Education I
- 732 Computer Science Application on Education II

Engineering, Industrial and Systems

- 550 Technology and Development

English Language and Literature

- 561-2-3 Colloquia in African or Oriental Literature

Finance

- 555 International Finance

Foreign Languages and Literatures

Spanish

- 543 Spanish-American Literature
- 544 Spanish-American Literature
- 547 Themes from Spanish-American Prose
- 548 Contemporary Spanish American Literature

Geography

- 525 Political Geography
- 527 Resource Management
- 530 Transportation Geography
- 531 Geography of Agricultural Activity
- 532 Geography of Manufacturing
- 545 Contemporary Southeast Asia
- 550 Geography of Northern Africa
- 551 Geography of Sub-Saharan Africa I
- 552 Geography of Sub-Saharan Africa II
- 555 Geography of South America
- 556 Geography of Middle America
- 622 Population Geography

- 680 Seminar: Contemporary Third World Problems
- 684B Seminar in Regional Geography: Southeast Asia
- 684C Seminar in Regional Geography: Africa
- 684D Seminar in Regional Geography: Latin America

Higher Education

- 785 Administration in Higher Education I: Structures and Organization
- 786 Administration in Higher Education II: Control and Support

History

- 522 Latin America in 19th Century
- 523A Latin America: Colonial Period
- 523B Latin American Survey, National Period
- 525 Inter-American Relations
- 526A Recent Latin America: Argentina, Brazil, and Mexico
- 526B Recent Latin America: Andean Nations
- 526C Recent Latin America: Central America and the Island Republics
- 533 Oil, Energy, and International Diplomacy
- 534 The Arab-Israeli Dispute
- 535A Middle East History to 1800
- 535B Middle East History Since 1800
- 536A North Africa in Modern Times
- 536B North Africa Since 1914
- 538 History of West Africa
- 538A History of East Africa
- 541A Africa to the 17th Century
- 541B Africa from the 17th Century to the Late 19th Century
- 541C Africa from the 19th Century to the Present Day
- 542 History of South Africa
- 542B South Africa in Recent Times
- 544A History of the Malay World
- 544B Burma and Thailand in Modern Times
- 544C History of Vietnam
- 544D Chinese in Southeast Asia
- 545A Southeast Asia to c. 1750: The Creative Synthesis
- 545B Southeast Asia: 1750-1942
- 545C Post War Southeast Asia: 1942 to Present
- 546A Traditional China
- 546B Modern China
- 548A Traditional Japan
- 548B Modern Japan
- 623 Colloquium in Latin American History: 1750-1880
- 627 Colloquium in Recent Latin American History
- 635 Colloquium in Middle East History
- 640 Seminar in African History
- 641 Colloquium in African History
- 644 Seminar: Southeast Asia
- 645 Colloquium in the History of Southeast Asia
- 646 Seminar: East Asia History
- 649 Colloquium in History of East Asia in Modern Times

Home Economics

- 525 Readings in Foods and Nutrition
- 526 World View of Nutrition

Interpersonal Communication

- 542 Communication and Persuasion
- 545 Communication in Organizations
- 548 Cross-Cultural Communications

Journalism

- 566 International Communications
- 567 Foreign Correspondence

Management

- 520 Administration of Personnel
- 540 Organizational Behavior — Leadership and Motivation
- 545 Organizational Behavior — Work Groups and Formal Organization
- 550 Managing of Health Care Organizations
- 584 International Comparative Management
- 596 Organizational Behavior — Managing Change

Marketing

- 501 Marketing Principle
- 541 International Marketing

Philosophy

- 570 Hinduism
- 571 Buddhism
- 572 Islam
- 576 Indian Philosophy
- 577 Buddhist Philosophy

Political Science

- 508 Urban Public Administration
- 510 Public Policy Analysis
- 511 Public Administration
- 512 Public Personnel Administration
- 513 Administrative Law
- 514 Organizational Theory and Behavior
- 516 Political Leadership
- 529 Comparative Public Administration
- 534 Government and Politics of Latin America
- 535 Revolution in Latin America
- 536 Politics of Brazil
- 541 Government and Politics of Africa
- 545 Government and Politics of Japan
- 547A,B Government and Politics of Southeast Asia
- 555 International Law
- 556 International Organization
- 561 Weak States in World Politics
- 579 Latin American Political Thought
- 582 Quantitative Political Analysis
- 590 Studies in Political Science
- 611 Seminar in Comparative Government
- 612 Seminar in International Relations and Organization
- 648 Politics of Southeast Asia

Psychology

- 520 Elementary Statistics
- 552 Myth and Symbolism

Sociology

- 508 Latin American Society
- 514 Contemporary Social Movements
- 524 Urban Sociology
- 530 Sociology of Organization
- 531 Social Stratification
- 565 Social Change
- 603 Seminar on Social Disorganization

Telecommunications

- 767 Comparative Systems Broadcasting
- 769 International Broadcasting

INTERPERSONAL COMMUNICATION

Graduate study in the School of Interpersonal Communication follows the principle that the program of study for each student be tailored to the individual's needs and capabilities, based on his or her background and professional goals. After completing the particular degree requirements, a graduate student is expected to have the appropriately broadened perspectives and attitudes of a generalist, with the commensurate knowledge and skills of a specialist.

Both the M.A. and Ph.D. degrees are offered; the appropriate degree may be pursued through study and research typically in one or more of the primary areas: communication theory and process, organizational communication, rhetoric and public address, and speech education. Additional primary areas representing emerging emphases (information systems, intercultural communication, etc.) are possible, depending upon the recommendation of the student's advisory committee.

To provide a common background perspective, INCO 600: Introduction to Graduate Study, or its equivalent is required of all graduate students. Academic ability, experience, and personal recommendations are considered in the admission of students to the graduate program. Those accepted may be required to make up any deficiencies through further work at the undergraduate level or by additional graduate courses, according to the needs of the individual student.

Methodology used in thesis or dissertation research may be experimental, descriptive, or historical, and it may be quantitative

or nonquantitative. A multidisciplinary approach to communication is emphasized. A nonthesis program for the master's degree may be followed, with faculty approval.

Graduate teaching associates may serve as instructors in basic courses, assist in the teaching of advanced courses, or help with special research projects or the extracurricular program in forensics.

The School of Interpersonal Communication will process applications for admission on a quarterly basis. Typically, the school begins awarding financial aid on April 1 of each year for the next academic year; therefore, early application for financial aid is encouraged.

MASTER'S PROGRAM

To be admitted *unconditionally*, a student must have completed the bachelor's degree at a duly accredited institution, and have demonstrated the capacity to pursue study on the master's level. Evidence of such capacity will be assumed from his or her prior personal, professional, and academic experiences as revealed in such indicators as recommendations and undergraduate grade-point average.

Two procedural tracks are available to the master's student: nonthesis and thesis. The latter emphasizes independent research, while the former stresses exposure to a greater number of formal course offerings. The nonthesis option typically shall be considered a terminal degree in this school. The student must declare his or her option prior to the completion of 15 hours of graded course credit at Ohio University.

At least 45 quarter hours of credit are required for the master's degree, whether thesis or nonthesis. A maximum of 12 quarter hours of graduate credit with grades of A or B may be accepted by transfer from approved institutions which offer the master's degree, provided the transferred coursework is acceptable to the student's advisory committee and is *not more than five years old*. At least 33 quarter hours of graduate credit must be earned on the Athens campus.

In addition to a full complement of daytime offerings, each quarter the school schedules a select number of graduate courses during evening hours. Such scheduling permits completing requirements for the M.A. degree through credits earned in either daytime offerings, evening offerings, or some combination thereof. Please contact the school for further details relating to these evening offerings.

DOCTORAL PROGRAM

To be admitted *unconditionally*, a student must have received the master's degree or completed equivalent work (as approved by the Graduate Committee) at a duly accredited institution. If the applicant's master's degree did not include a thesis, he or she must present for evaluation by the Graduate Committee other evidence of his or her scholarly writing ability. Additional evidence of the student's ability to pursue study at the doctoral level is required, as documented from previous personal, professional, and academic experiences.

At least 72 quarter hours of credit beyond the master's degree (or its equivalent) are required for the doctor of philosophy degree, plus a satisfactory dissertation. A maximum of 16 quarter hours of post-master's degree graduate credit with A or B grades may be accepted by transfer from approved institutions which offer post-master's (doctoral level) work for application to the student's primary area, and eight hours of such work for application to each related area; provided the transfer work is not more than five years old, and is acceptable to the student's advisory committee, the Graduate Committee, and the associate provost for graduate studies and research. At least 48 quarter hours of doctoral credit must be earned on the campus of Ohio University. At least three consecutive quarters must be spent in an institutional full-time status on the Athens campus.

521 Instructional Methods (5)

Includes philosophies of organizational development, theories of instructional design, emphasizing stages of planning, implementation, and evaluation; and communication training skills, including needs assessment and evaluation, writing objectives, application of communication content, and selection of instructional modes and resources — all investigated within business, professional, and governmental organizational contexts

Staff

525A Direction of the Forensic Program (3)

Prereq: secondary school teaching interest. Organization of forensic programs, management of contests and tournaments, principles of coaching and judging.

Staff

525B Direction of the Forensic Program (3)

Prereq: college teaching interest. Organization of forensic programs, management of contests and tournaments, principles of coaching and judging.

Staff

533 Applications of General Semantics (5)

Chief formulations from general semantics and their applications to field of communication.

Staff

535 Theories of Argument (4)

Relationship between formal logic and rhetorical systems of arguments; intensive study of fallacies and of experimental findings related to study of argument.

Staff

542 Communication and Persuasion (5)

Prereq: perm. Process of communication and attitude change, survey of general theories and typical research, analysis of contemporary persuasion.

Staff

545 Communication in Organizations (5)

Introduction to organizational communication. Specific objectives include development of historical progress, examination of major research issues such as information flow, network analysis, communication overload and underload; exploration of theoretical foundations in organizational decisionmaking, superior-subordinate communications, organizational effectiveness and change processes.

Staff

546 Communication and the Campaign (5)

Processes of communication as applied in a campaign, defined as any organizational goal-oriented effort designed to influence behaviors of identifiable population. Emphasizes theory application in nonclassroom campaign situations (political, fund-raising, publicity, etc.).

Staff

548 Cross-Cultural Communication (5)

Analysis of processes and problems of communication as affected by national cultures; effects of differences in languages, values, meaning, perception, and thought.

Staff

558 Responsibilities and Freedom of Speech in Communication (5)

Ethical and rhetorical implications of constitutional guarantees on political, social, and religious speech; analyses of significant legal cases on freedom of expression.

Staff

560 Principles of Message Analysis (5)

Theory, research, and practice in analyzing human messages produced in natural settings. Survey of various coding methods: type/token ratio, content analysis, discourse analysis, and relational analysis; application of selected techniques to previously generated messages.

Staff

600 Introduction to Graduate Study (5)

Definition of field of communication, methods of structuring field, and research concerns within areas of field. Examination of theory and function of research. Analysis of representative types and methods of research, including reporting results.

Staff

601 Measurement Methodology in Communication (5)

Prereq: perm. Measurement principles, instruments, and techniques in communication; problems and procedures in testing, measuring and evaluating communicative attitudes and skills; development and availability of relevant standardized tests.

Staff

610 Theories of Communication (5)

Prereq: perm. Survey of contemporary communication theory, emphasizing cross-disciplinary contributions to such theory.

Staff

612 Language and Symbol Systems (5)

Prereq: perm. Role of verbal and nonverbal signs and symbols in communication. Emphasizes human symbolizing capabilities and

relationships between symbolic structures and physical reality.
Staff.

640 Nonverbal Communication (5)

Prereq: perm. Survey of major theories and research areas in field of nonverbal communication. In-depth analysis of research in areas of student interest.

Staff.

642 Communication in Social Conflict (5)

Prereq: 542. Roles of communication in conflict and conflict in communication. Communication strategies for reducing or managing conflict in social situations.

Staff.

645 Communication Consulting Practices (5)

Prereq: 545. Designed to give students practical skill development in consulting practices as well as development of critical assessments of research in consulting. Includes ethical considerations for communication consultants, contract negotiations, entry level behavior with clients, appropriate communication instruments used for interventions, and evaluative procedures.

Staff.

650 Classical Rhetoric (5)

Principles of rhetoric based upon writings of Aristotle, Plato, Cicero, and Quintilian. Individual research studies of classical theorists and practitioners.

Staff.

654 Medieval and Renaissance Rhetoric (5)

Prereq: 650. Rhetorical theories during Roman Empire, medieval Arab culture, and European medieval and Renaissance cultures with emphasis on English Renaissance rhetoricians.

Staff.

656 Modern Rhetoric (5)

Aims, tasks, and significance of rhetoric in relation to human communication processes. Distinctions among speculative, critical, canonical, and performative perspectives in rhetorical inquiry.

Staff.

662 The Rhetoric of Protest and Reform (5)

Prereq: perm. Rhetorical analysis and criticism of speaking during reform and revolutionary protest movements. Selected areas include American Revolution, anti-slavery debates, Populists, Progressives, labor unrest, women's rights, and civil rights agitation.

Staff.

664 Religious Rhetoric (5)

Prereq: perm. Pulpit oratory examined through analyses of selected clerics, including Luther, Wesley, Whitefield, Beecher, Brooks, Fosdick, Sunday, Graham, and others. Rhetorical analysis of revivalism, camp meetings, social gospel, and ecclesiastical and polemic debates.

Staff.

666 Analysis and Criticism of Legal Rhetoric (5)

Prereq: perm. Analysis and criticism of principal modes, types, and styles of western legal rhetorical communication as mirrored in selected cases, jurists, attorneys, decisions, and arguments, with western legal communication studies as unique mode of rhetoric, focusing upon English-American jurisprudence and courtroom advocacy. Case study method employed. Critical analysis accomplished.

Staff.

668 Analysis and Criticism of Political Rhetoric (5)

Prereq: perm. Analysis and criticism of principal modes, media, techniques, and effects of western political rhetorical communication. Theory and practice as reflected in major campaigns, administrations, and movements in both open and closed societies.

Staff.

670 The Rhetoric of the World Wars (5)

Prereq: perm. Analysis and criticism of wartime communication, its principal modes, techniques, media, and effects. Theory and practice as reflected in WW I and II.

Staff.

693 Independent Study (1-15)

Prereq: perm. Readings on special problems under planned program approved by advisor. Projects must be approved prior to registration.

Staff.

694 Research (1-12)

Prereq: perm. Individual research on special problems. Projects must be approved prior to registration.

Staff.

695 Thesis (1-15)

Staff.

697 Internship (1-15)

Prereq: written proposal and perm. Experience in communication-related activities in organizational environments.

Staff.

701 Research Designs in Communication (5)

Prereq: 601 or perm. Nature and selection of communicative research problems; development of strategies, techniques and appropriate designs; critical evaluation and development of experimental and descriptive procedures.

Staff.

705A Communication Historiography I: Methodology (5)

Prereq: 600 or equiv. Philosophy and methodology of art of history; examination of historian-in-action; inquiry into nature of history as special type of knowledge and object. Methods, procedures, techniques of communication historian examined theoretically and experienced practically; aim is professional competence (doctoral level, dissertation-research level) with historical method of research.

Staff.

705B Communication Historiography II: Technique and Procedures (5)

Continuation of 705A. See 705A for description.

Staff.

710 Dyadic Communication (5)

Prereq: 610 and/or perm. Provides advanced graduate students with opportunity to identify and analyze basic components of dyadic communicative system, including multivariate nature of both relationships and effects.

Staff.

742 Theories and Processes of Persuasion (5)

Prereq: perm. Survey and analysis of representative theories and models of persuasive processes and their relationships to communicative processes. Variables affecting implementation of persuasive principles and techniques.

Staff.

744 Listening Behavior: Theory and Research (5)

Analysis and evaluation of listening process in terms of its theory, research, and operational characteristics.

Staff.

745 Communication Process in Small Groups (5)

Theory and research in group social system, group modification of individual judgment, leadership styles, group vs. individual goals, and intragroup lines of communication in small problem-solving and learning groups.

Staff.

746 Communicative Process in Organizations (5)

Prereq: perm. Interaction between organizational structure and communication within organizations. Emphasis on theoretical and methodological analysis. Primary focus on conducting major research project, i.e., communication audit.

Staff.

748 Communication and Information Diffusion (5)

Prereq: perm. Analysis of major approaches to data and information diffusion systems on local, regional, national, and international levels. Emphasis on acquisition, analysis, and dissemination of data as information, including critical points of interface and interaction between system and its users.

Staff.

749 Topics in Communication (1-5)

Prereq: perm. Communication topics of interest to faculty and students not covered by regular classes. Each offering will consider different topic on 1-time-only basis. May be repeated.

Staff.

780 Rhetorical Criticism (5)

Theories and methodologies of selected modern critics. Exploration of interdisciplinary dimensions in criticism of rhetorical interactions. Class and individual projects.

Staff.

790 Interdisciplinary Seminar (3-12)

794 Research (3-12)

Prereq: perm. Individual research on special projects. Projects must be approved prior to registration.

895 Dissertation (1-24)

ITALIAN

(See Foreign Languages and Literatures)

JOURNALISM

The School of Journalism offers the master of science degree. Also, in cooperation with the School of Telecommunications, it offers the doctor of philosophy in mass communication (See Mass Communication).

The master's program is designed to prepare students for professional journalism or for further academic work. The program blends professionally oriented courses with courses in the principles and theory of mass communication.

Admission is based on the student's academic and professional background. Applicants need not have an undergraduate major in journalism.

Master's degree students may choose between two plans. Plan A, for students who plan to go into college teaching or other fields involving the direction, conduct, and use of research, requires 49 hours including a thesis. Plan B, for students who intend to go into professional journalism and who lack extensive experience in the field, requires 49 hours including a graduate internship. Both plans require that the student take JOUR 511, 512, 803, 806, and 811 or 816. Any of these required courses will be waived if the student presents evidence that he or she has had an equivalent course previously. Master's students will be required to take undergraduate reporting, editing, and graphics, if they have not previously taken such courses, and four graduate professional courses.

A master's student must receive a grade of B- or above in each of the required graduate-level courses. Also, only graduate credits with a grade of B- or above will count toward the 49-hour minimum total of graduate-level work.

To assist the School of Journalism in evaluating qualifications, each applicant for master's or doctoral-level work should submit his or her scores on the aptitude tests of the Graduate Record Exam. Completion of the Miller Analogies Test is also recommended.

511 Newspaper and Communications Law (4)

Principles and case studies in communications law, constitutional guarantees, libel, privacy, contempt, privilege, copyright, and government regulatory agencies.

Evarts, Stempel; F, W, Sp; Y, 1983.

512 Mass Media and Society (3)

Social responsibility of journalist or other mass communicator. Professional codes, responsibility of media for social change, reaction to political and economic pressures.

Anderson, Click, Izard, Lambert; F, W, Sp, Su; Y, 1983.

521 Graphic Production Processes (5)

Prereq: perm. Advanced study of all processes for reproducing printed communication. Theory and lab.

Staff, W; 1977.

522 Advertising Production (3)

Techniques and problems in methods of advertising production.

Turnbull, D; 1968

525 Photojournalism (3)

Prereq: perm. Basic principles and practices of photojournalism for newspapers, magazines, and television. Students shoot, process, and print pictures on assignment.

C. Scott, F, W, Sp, Y, 1983

526 Advanced Photojournalism (3)

Prereq: 525. Continuation of 525

C. Scott, W, Sp, Y, 1983

530 Magazine Editing and Production (4)

Prereq: 221. Theory of magazine editing, production, and publishing with lectures on various types of magazines available today and analysis of audiences they serve. Formulas for publishing, editorial content, and article selection, illustration and layout, and technical procedures including sales and fulfillment. Each student will prepare dummy magazine of his or her own design.

Baird, Click, B. Scott, F, W, Sp, Y, 1983

531 Magazine Editing and Production Practice (3)

Prereq: 430 or 530. Practice course where students apply their knowledge to production of quarterly magazine done regularly by

School of Journalism. Each student assigned specific position on magazine.

B. Scott, Click; F, W, Sp; Y, 1983.

532 Specialized Magazines (3)

Prereq: 531 or perm. Career opportunities in magazine journalism revealed by in-depth studies of professional, business, industrial, and regional magazines. Course considers publishing problems through case studies.

B. Scott, Wilhelm; Sp; Y, 1983.

535 Picture Editing (3)

Prereq: perm. Principles and practices of picture editing. Includes consideration of picture sources, assignment, and handling; photographic techniques and esthetics; legal and ethical factors; visual idiosyncrasies of various media.

C. Scott; F, W, Sp; Y, 1983.

536 Advanced Picture Editing (3)

Prereq: 535. Continuation of 535.

C. Scott; W; Y, 1983.

541 Magazine Feature Writing (4)

Writing and marketing factual magazine feature articles of various types. Finding subjects, securing photographs, writing articles, and surveying markets.

Alsbrook, Dohn, B. Scott; F, W, Sp, Su; Y, 1983.

542 Advanced Magazine Feature Writing (3)

Writing and marketing magazine articles. Emphasis on specialized markets and new trends in industry. Students attempt actual assignments for magazines nationwide.

Haggerty, B. Scott; W, Sp; Y, 1983.

550 Advertising Copy Writing (3)

Effective persuasion in print and broadcasting.

Baker, Helitzer, Peters, Turnbull; F, W, Sp; Y, 1983.

552 TV Newsfilm Production and Editing (3)

Prereq: perm. Principles and practices of TV newsfilm production and editing.

Staff; F, Sp; Y, 1983.

555 Seminar in Broadcast News (3)

Discussion of problems — operational, social, economic, legal, and ethical — faced by broadcasters reporting public affairs.

Dohn, Shultz; Sp; Y, 1983.

561 Specialized Journalism (3)

Seminar approach to individual study of journalistic areas of special interest to individual students.

Click; D; 1973.

564 Reporting of Public Affairs (3)

Problems of preparing in-depth, interpretative, and analytical reports on public affairs for mass media, governmental reporting, and contemporary controversial issues.

Izard; F, Sp; Y, 1983.

565 The Editorial Page (3)

Editorial page in opinion information. Problems of content selection and presentation. Extensive writing of analytical and persuasive editorials and interpretative articles in depth.

Dohn, Evarts, Lambert; F, W, Sp; Y, 1983.

566 International Communications (5)

Development and operations of world mass communication channels and agencies. Comparative analysis of media, media practices, and flow of news throughout world. Relation of communication practices to international affairs and understanding.

Kliesch; F; Y, 1980.

567 Foreign Correspondence (3)

Prereq: 231 or perm. Senior course in advanced international reporting for those who have lower-level reporting classes or experience. Students write reports of U.S. for newspapers abroad. Selected students eligible for internships abroad.

Wilhelm, W, Y, 1983

571 Public Relations Principles (5)

Public relations planning and techniques; selected communication studies and theories. Polling, defining objectives, and analysis of public relations messages.

Culbertson, F, W; Y, 1983

572 Advanced Public Relations (4)

Planning public relations programs and projects, including selection of audiences, messages and media, and evaluation of effects. Project in area of student's interest.

Baker, Helitzer, W, Sp, Y, 1983

581 Newspaper Management (3)

Problems in publishing affecting all departments.
B. Scott; D; 1983.

582 Broadcast Advertising and Management (4)

Baker, Peters; F, Sp; Y; 1983.

584 Supervising School and College Publications (4)

Conference course for advisors of high school and college newspapers, magazines, and yearbooks. Problems relating to staff selection, content of publications, copy, layout, photography, printing, advertising, and business phases.

Click; W; Y; 1983.

585 Journalism in the Secondary School Curriculum (4)

Prereq: 9 hrs of journalism. Intensive study and analysis of appropriate content for high school journalism courses. Planning course outlines and curricula.

Click; D.

601 News Media Development and Procedures (1-15)

Prereq: perm. Current procedures of mass media. Intended for students without undergraduate journalism major.

Staff; F, W, Sp; Y; 1983.

635 Seminar in Picture Editing (3)

Prereq: perm. Study of picture-editing practices in newspapers, magazines, and television.

C. Scott; Sp; Y; 1983.

662 Graduate Internship (6)

Prereq: prior perm. Conference course for students who have completed internship with approved organization. Student will submit comprehensive report analyzing internship experience.

Staff; F, W, Sp, Su; Y; 1983.

691 Research in Journalism and Communications (1-15)

Prereq: perm.

Staff; F, W, Sp, Su; Y; 1983.

695 Thesis (1-6)

Staff; F, W, Sp, Su; Y; 1983.

790 Independent Study (1-4)

Prereq: written proposal and perm prior to registration. Student can pursue personal scholarly interests under faculty supervision.

Staff; F, W, Sp, Su; Y; 1983.

792 Seminar (3-5)

Prereq: grad rank. Selected topics of current significance. May be repeated with different topics.

Staff; F, W, Sp; Y; 1983.

803 Seminar in Mass Communications Theory (5)

Communication process, interpersonal and mediated, and possible barriers to effectiveness. Review of literature on effects of mass communication on individuals and groups, contrasting channels, and message structures. Media as social and economic institutions.

Culbertson; F, W; Y; 1983.

806 Research Methods (5)

Techniques for study of communications content, message sources, audiences, and effects.

Stempel; F, W; Y; 1983.

811 Seminar in History of Journalism (5)

Significant individuals, agencies, and developments in history of American journalism. Research in historical bibliography in field of journalism; individual projects and readings; application of historiographic methods.

Dohn, Kliesch; W; Y; 1983.

812 Government and Mass Communications (4)

Communications and political order. Theory and structure of democratic and totalitarian communications systems, relationships between government and mass communications in modern world.

Dohn; F; Y; 1983.

814 Literature in Journalism (4)

Directed reading and discussion in literature.

Stempel; Su; D; 1981.

815 Seminar in Theory of Freedom of the Press (4)

Prereq: 511. Historical and philosophical development of concept of free expression and its relationship to development of Anglo-American system of information flow. Contrasting ideologies and their evolution. Implications of these theories in contemporary states.

Izard; Sp; Y; 1983.

816 Seminar in Mass Media Research (5)

Prereq: 806. Students present research ideas to seminar, discuss progress and problems, report findings, and defend projects before group. Emphasis also on scaling and measurement, non-parametric statistics, research strategy, and nature and function of theory in mass communication research.

Culbertson; Sp; 1983.

830 Development of American Magazines (4)

Prereq: grad rank. Investigation into and seminar discussion of role of magazine in American society from 1741 to present with emphasis on 20th century. Problems of magazine publishing, problems of magazine editing, and structure and nature of magazine industry in U.S.

Click; W.

850 Seminar in Advertising Copy (4)

Human information processing as it affects advertising copy.

Staff; D; 1980.

866 Seminar in International Communication (5)

Prereq: 566, 803. Directed research and reading applied to problems of international communication and comparative foreign journalism. Each student studies press of selected nations or areas in which he or she has special interest.

Kliesch; Sp; Y; 1981.

871 Public Relations Problems and Programs (4)

Prereq: 571, 572. Overall planning and operation of public relations programs in government, industry, and in educational and nonprofit organizations. Analysis and seminar discussion of problems and policies in such institutions. Case method used in conjunction with individual field studies conducted by class members.

Culbertson; Sp; Y; 1983.

895 Dissertation

Staff; F, W, Sp, Su; Y; 1983.

LATIN

(See Foreign Languages and Literatures)

LATIN AMERICAN STUDIES

(See International Affairs)

LIBERAL STUDIES

The Master of Liberal Studies Program is based on the premise that a college graduate who comes to realize what he or she did not learn as an undergraduate is ready to begin learning with a true spirit of inquiry. This interdisciplinary program is not intended to train students for a particular vocation, to provide them accrediting for a profession, or to prepare them for further graduate study. The program adheres to the values of liberal arts education, but at the graduate level, offering to out-of-school adults drawn from a variety of backgrounds and professions an alternative to the usual specialized programs.

The Liberal Studies Program aims to provide a framework within which the mature student can pursue his or her individualized educational objectives in a coherent and unified way. Students may seek the master of liberal studies degree for a variety of reasons, ranging from career-related concerns to the desire for intellectual stimulation and personal enrichment; teachers seeking further education to strengthen themselves in their own or related fields; other professionals, such as lawyers, public officials, engineers, and administrators, seeking an opportunity to continue and deepen the life of the mind in disciplines different from those of their own career or formal education; workers, active as well as retired, desiring a coherent and unified course of study that differs from those offered in the customary continuing education programs. These varying interests are subsumed in a concern for personally rewarding further education in a humanistic context.

The program is designed to allow each student to arrange a pattern of study to match his or her needs. Each student, with encouragement, criticism, and counsel from faculty and peers is allowed to build on previous academic work and to focus his or her living and work experiences on the best works that have been produced in the history of civilization. In particular the student is encouraged to pursue the relationships between fields of study, disciplines, questions of current interest, and public-policy issues. The program is designed to enable a community of mature adult learners, both faculty and students with widely varying backgrounds, to work together, to exchange views and criticism, and to provide mutual support inside and outside the classroom. In order to make the program available to the widest possible cross-section of adults, courses are offered at various times of year in a variety of time frames; coursework may be supplemented by independent study.

The liberal studies faculty, representing the several disciplines of the University, remain administratively attached to their respective departments but teach in the program because of their interest in reaching out of their own specialized fields to teach and learn from the adults who come to the program with wide interests and special needs and expertise.

Required for admission to the program are a minimum grade-point average of 2.8 for all undergraduate work and a bachelor's degree in any discipline from an accredited institution. Supporting documents normally required are a transcript of all undergraduate work, three letters of recommendation, and a formal application with fee. In addition to these materials required by the Office of Graduate Student Services, the applicant should send a short essay of about 500 words, outlining any significant background not indicated on the forms and explaining his or her interest in the Liberal Studies Program. This essay not only will aid the faculty in focusing the student's academic interest but also may aid the applicant's admission into the program in lieu of sufficient academic credentials.

General Requirements

A total of 45 credits, in addition to a thesis, is required for the degree (the equivalent of one year of full-time study). The typical student will complete the coursework in three years. Each student, with advice and consent of a faculty committee, designs an individualized course of study with certain prescribed options as follows:

1) Required courses: A minimum of 15 credits, three colloquia, must be taken from a core of five that are offered. The core colloquia are intended to raise basic epistemological questions which the students will continue to rephrase in subsequent interdisciplinary seminars.

2) A minimum of 15 credits must be taken from the offering of interdisciplinary seminars specifically designed for the Master of Liberal Studies Program.

3) Supplementary courses and independent study: A maximum of 15 credits may be taken from the several graduate departments at Ohio University. A maximum of 15 credits may be applied from courses transferred from another institution, or from various kinds of independent study. Under the direction of a faculty member, a student will design his or her own independent study project that could include reading, selective viewing of educational television, films, lectures, tours of museums, galleries and historical places, participation in various humanities programs. In short, the student will be encouraged to apply the theory learned in the core colloquium to integrate the knowledge that he or she can gain from the innumerable resources of our modern society.

4) Thesis. The research is to incorporate methods and results from more than one traditional scholarly area. However, the rigor and length are the same as for an ordinary intra-disciplinary thesis. All proposals must be approved by a director and two additional faculty members who serve as the committee of evaluation and acceptance of the finished thesis and by the director of M.L.S. The problem focus of the thesis shall help determine the student's course selection within M.L.S. and especially any non-M.L.S. courses submitted in partial fulfillment of the degree requirements.

501 Introduction to Interdisciplinary Studies (5)

Colloquium focusing on 2 questions raised in order to give direction to each student's academic pursuits: what kinds of knowledge are most worth having? — What are ways of integrating knowl-

edge? Topics to be discussed: origin, nature, and purpose of liberal education; modes of instruction used to acquire it; methodology and assumptions underlying various academic disciplines; history and philosophy of interdisciplinary studies. Compares and contrasts 4 theoretical modes of integrating knowledge: encyclopedic, historical, methodological, and conceptual.

Organ (philosophy); D; F; 1980.

502 Introduction to the Encyclopedic Integration of Knowledge (5)

Philosophical assumptions underlying methods of assembling, classifying, and organizing knowledge according to subject matter.

D.

503 Introduction to the Historical Integration of Knowledge (5)

Colloquium, concerned with various philosophies of history, aims to give student framework within which to place additional knowledge. Problems such as these examined: Why is it important to date events in human history? What is meaning of history? What is time? Is it merely a human construction? What does time measure?

D.

504 Introduction to the Methodological Integration of Knowledge (5)

Underlying assumption of this colloquium is that knowledge can be classified in terms of methods used to form, evaluate, test, and accept or reject hypotheses. Such concepts as following examined in effort to determine which methods are appropriate for given subject matter: insights, intuitions, hunches, mystical experiences, reasons, rationalism, trial and error, evidence, proof, experience, controlled experiments.

D.

505 Introduction to the Conceptual Integration of Knowledge (5)

Colloquium focuses on concept such as "The Great Chain of Being" or "The Dignity of Man" and explores way in which this concept serves as organizing principle of knowledge.

Organ (philosophy) and staff; Sp; D; 1980.

506 Poetry and Its Relation to Music from 1700 to 1900 (5)

Aim is to give students understanding of spirit of 18th and 19th centuries — how it expresses its main humanistic and artistic ideas — and to help him or her appreciate personal achievement of major composers and poets in relation to their age, and to us who stand outside the age.

Jones (English); D.

507 Technology and Man — Bioethical dilemmas (5)

Aim is to investigate ways in which human behavior, especially as it relates to justice and law, might be affected by advances in biological science. Topics range from human sexuality to role and effects of drugs in society, and from environmental effect of pollutants to behavior modification and reproductive and genetic engineering.

Witters (zoology); D.

508 Decision-Making, Public and Private (5)

Explores problem of conflict between individual and institution in 20th century. Some questions to be discussed: How should individual reconcile demands of conflicting responsibilities to self, to family, to society? What can happen when public officials make decisions without accepting public accountability? To what extent should governmental policies express will of majority? Can satisfactory guidelines be established to balance government's need for secrecy and public's right to know?

Danner (modern languages) and staff; D, F; 1980.

509 Behavior: A Zoological Perspective (5)

Beginning with principles of ethology and introduction to primates, course traces development of behavior in *Homo sapiens* and other primates. Lectures, films, and discussions deal with topics such as mother-young interactions, childhood autism, fixed action patterns, nonverbal communication, incest taboo, pair-bonding, status, sex roles, imprinting, aggression, sociobiology.

Rouner (zoology); D, Su, 1980

510 Value and Conflict in Chinese and Japanese Culture (5)

Examines conflict between traditional and modern values as reflected in Chinese and Japanese fiction and social science literature. Some issues dealt with will be role of family, relationship of individual to society, role of women, and nature of authority.

Lin (English), Jordan (history), Elsbree (political science), D

511 The Public and Private Good (5)

Focuses on one of most enduring political issues in history of humankind — question of proper balance of interests between individual and state. Whereas 508 focuses on issue from various modern perspectives, this course traces issue from earlier periods of Western civilization.

D; W; 1980.

512 Ways of Meaning (5)

Course attempts to assess idea that differences among disciplines hinge on different sets of properties prominent in symbol systems (i.e. languages) of different disciplines. Ways of discovering different properties which make semantic differences examined. Relation of language to what it is about and to its users examined with eye to how world views are differently decided.

Ruchti (philosophy), McCarthy (art), Moates (psychology); D; Su; 1980.

513 The Humanistic Roots of the U.S. Constitution and the American Character (5)

In studying American character, course raises 3 basic questions at heart of study of humanities — Who are we? Where have we been? and Where are we going? As basis for seminar discussion students will read 3 categories of texts: (1) Founding documents — *The Articles of Confederation*, *The Declaration of Independence*, *The U.S. Constitution* and selected *Federalist Papers*. (2) Humanistic works that influenced founding fathers — Aristotle's *Politics*, Shakespeare's *Julius Caesar*, John Locke's *Second Treatise on Civil Government*, and Montesquieu's *The Spirit of the Laws*. (3) Selected works that bear on some essential element in American tradition and enlighten our understanding of present living Constitution — Lincoln's "Gettysburg Address," de Toqueville's *Democracy in America*, Mark Twain's *Huckleberry Finn*, Frederick Douglass' "Fourth of July Oration," W.B. DuBois' *Souls of Black Folks* and Edward Albee's *Who's Afraid of Virginia Woolf?*, Supreme Court Decision on "Nixon versus the U.S."

D; W.

514 The Development of Modern Historical Consciousness (5)

Study of development of modern historical consciousness — view of humankind, its social institutions and its physical environment as part of dynamic process. Historians and historical thinkers existed in earlier periods, but the distinctively modern obsession with change and progress grew out of discoveries of important 19th century philosophers, scientists, and writers. Introduces some of the most important modern thinkers and assesses legacy of their thought for contemporary people.

McWilliams; D; Sp; 1980.

518 History of War and Peace (5)

Discusses causes and possibilities for peace. Not limited by time or by geography, although we will use mostly examples of wars in 19th and 20th centuries. Emphasis on how wars are prevented and how they end as seen by classic writers in politics, philosophy, economics, and sociology.

Whealey; D; W; 1981.

LINGUISTICS

The Department of Linguistics offers two programs leading to master of arts in linguistics. Instruction in Teaching English as a Foreign Language (TEFL) is for those persons who wish to teach nonnative speakers of English in international or domestic settings. The General Linguistics program is primarily for students who intend to do doctoral-level work in linguistics, but it may serve as a base for further study in English language, education, psychology, and other fields where an understanding of the structure and nature of language is necessary. The master of arts degree can be completed in seven consecutive quarters. Candidates demonstrate their achievement by writing either a thesis or a major research essay on a specialized topic.

Admission for graduate study in linguistics requires no specific undergraduate preparation, but backgrounds in English, foreign language, speech, psychology, mathematics, or philosophy are particularly relevant. Transcripts of all previous study must be submitted and must indicate strong promise of the applicant's success in graduate study. The applicant's record must also include evidence of two years of college-level study of foreign language. Admission is possible for applicants who cannot meet this

requirement, but it must then be satisfied by concurrent nondegree study. Nonnative speakers of English may use their study of English to satisfy this requirement. Teacher training and experience are highly desirable preparation for native students intending to follow the TEFL curriculum. For nonnative applicants to the TEFL program, both teacher training and an undergraduate major in English are required.

While there is no specific deadline for submission of application materials, applicants are encouraged to begin their work in the fall quarter. Applicants for financial aid for the following academic year must submit application materials by April 1.

Specific and detailed information about the programs available and the requirements thereof may be obtained by writing to the Chair of the Department of Linguistics, Ohio University, Athens, Ohio 45701.

510 Language Teaching Practicum (1)

Supervision of grad student teaching. Required of all MA-TEFL majors and all teaching assistants.

Staff; F, W, Sp, Su; Y.

540 Introduction to Bilingualism (5)

Prereq: 550 or perm. Introduction to basic aspects of bilingual education from legal, sociological, linguistic, and educational perspectives.

Staff; Sp; Y.

545 Instructional Materials in Bilingualism (5)

Prereq: 540 or perm. Analysis and creation of bilingual teaching materials.

Staff; D.

550 Introduction to General Linguistics (5)

Technical introduction to linguistics, devices of language description, and methods of linguistic analysis.

Hubbard; F, W, Sp; Y.

555 Introduction to Graduate Study in Linguistics (3)

Introduction and orientation to field of linguistics and its research resources.

Flanigan; F; Y.

560 Phonology (5)

Introductory course in analysis of sound systems of natural languages.

Coady; F; Y.

565 Theories of Phonology (5)

Prereq: 560. Latest developments in phonological theory, concentrating on theory of generative phonology in contrast with classical phonemic theory.

Coady; W; Y.

570 Syntax (5)

Introduction to theories and applications of grammatical analysis.

Soemarmo; Sp; Y.

572 Theories of Grammar (5)

Prereq: 570. Study of competing contemporary models of grammatical description.

Soemarmo; Su; Y.

580 TEFL Theory and Methodology (5)

Prereq: 550, 586. Second language teaching theory and methodology, with emphasis on teaching English as foreign language.

Parsons; Sp; Y.

582 Materials in TEFL (5)

Prereq: 550, 580, 586. Theory and practice of analysis, evaluation, and creation of instructional materials for teaching English as foreign language.

Fry; Su; Y.

586 Theories of Language Learning (5)

Prereq: 550. Theories of 1st and 2nd language acquisition and their applications to development and evaluation of language teaching methodology.

Staff; W; Y.

590 Sociolinguistics I (5)

Prereq: 550 or perm. Language varieties and their social functions, with implications for educational policy and national language planning.

Flanigan; W; Y.

591 Sociolinguistics II (5)

Prereq: 590 or perm. Introduction to interrelationships between language and social groups.

Staff; D.

600 Studies in Linguistics (1-4)

Prereq: perm. Directed individual investigation of particular area of interest in linguistics.

Staff: F, W, Sp, Su.

620 Research in Linguistics (5)

Prereq: 586. Introduction to aspects of research design in linguistics.

Parsons; F; Y.

640 Topics in Applied Linguistics (5)

Prereq: 586, 675. Comprehensive review and critical examination of basic assumptions, approaches, and methods of various subfields of applied linguistics.

Flonigan; Sp; Y.

650 Historical Linguistics (5)

Prereq: 560 or perm. Genealogical and typological classification, methods of historical analysis, and change in language systems.

Schneider; F; Y.

652 Computational Linguistics (3)

Prereq: 550. Application of computers to linguistic research and teaching.

Soemarmo; D.

675 Linguistic Semantics (5)

Prereq: 570. Semantic aspects of standard theory in generative grammar.

Soemarmo; W; Y.

682 Proseminar in TEFL (5)

Prereq: 620. Research and readings in special problems in teaching English as foreign language.

Staff; W; Y.

683 Proseminar in TEFL: Testing (5)

Prereq: 582. Advanced research in special problems in testing English as foreign language.

Staff; D.

685 Proseminar in Applied Linguistics: Reading (5)

Prereq: perm. Group and individual research in applied linguistics: Reading.

Coady; Sp; Y.

690 Languages in Contact (4)

Prereq: 560, 570. Social, psychological, and pedagogical consequences of language contact, with emphasis on linguistic transfer, borrowing, and pidginization and creolization.

Staff; D.

695 Thesis (5-10)

Prereq: 620, 675. Advanced research culminating in thesis.

Staff, W, Sp; Y

696 Field Methods (5)

Prereq: 560, 570, or perm. Methods of eliciting, transcribing, organizing, and analyzing linguistic data.

Schneider, F; Y

699 Proseminar in Linguistics (5)

Prereq: 675. Individual research and writing in general linguistics.

Staff, W; Y

760 Seminar in Phonology (5)

Prereq: perm. Research on selected topics in phonological theory.

Coady; D

775 Seminar in Linguistic Semantics (5)

Prereq: 675. Survey of contemporary semantic theories.

Soemarmo, Sp, Y

795 Seminar in Area Linguistics (5)

Prereq: perm. Research on particular aspects of languages of given area.

Staff, D

800 Readings in Linguistics (2-5)

Prereq: perm. Directed readings for advanced students.

Staff, F, W, Sp, Y

MASS COMMUNICATION

The School of Journalism and the School of Telecommunications jointly offer a doctoral program in mass communication. Students may work toward a Ph.D. in mass communication with emphasis on telecommunications, journalism, or mass communication research.

The minimum requirements for the doctorate are a total of 135 quarter hours of graduate work, including previous work on the graduate level which has been accepted for transfer, and further including up to 15 quarter hours of credit for the dissertation, a major of at least 54 quarter hours (other than dissertation) in mass communication; at least 18 quarter hours in a related area outside the College of Communication; distribution of the remaining hours, up to a total of at least 135, among courses within or outside the college which the student, with the approval of his or her guidance committee, believes will contribute to his or her professional competence; and two scholarly disciplines (e.g., statistics, historiography) or intensive proficiency in one scholarly discipline.

The Ph.D. program in mass communication at Ohio University is highly student-oriented. Rather than conforming to a common set of requirements, each student chooses his or her own program of study (with the advice and approval of his or her guidance committee) according to needs determined by personal and career goals.

Because there are minor differences in procedures employed by the schools cooperating in the mass communication program (for example, while the School of Journalism requires that all applicants file GRE scores and recommends that MAT scores also be supplied, the School of Telecommunications requires only that applicants file either the GRE or MAT scores), those who wish to make application are advised to contact the graduate coordinator of the school through which entry is sought.

Doctoral candidates in other fields may minor in journalism or telecommunications with the approval of the graduate coordinator.

Although qualified applicants may apply for admission in any quarter, a completed application for admission must be received at least four weeks prior to the date the student plans to enroll. Applications for financial aid for the following academic year must be received by March 1.

For course offerings, see listings under Journalism and Telecommunications.

MATHEMATICS

The Department of Mathematics offers the master of science degree and the doctor of philosophy degree. At the master's level there are programs available in applied mathematics, computer science, mathematics for secondary school teachers, and pure mathematics. At the doctoral level students may specialize in algebra, analysis, topology, and applied mathematics. The principal feature of graduate study in mathematics is the possibility of designing a study plan to meet an individual's needs and interests. Students may elect to concentrate in a particular area, or choose a broad program to prepare for a nonresearch career such as college teaching.

To be admitted to graduate study the applicant should have an undergraduate average of at least B. The undergraduate program of those students who plan to pursue the study of pure or applied mathematics should have included advanced calculus and junior- or senior-level courses in abstract and linear algebra. Prospective computer science majors should have completed at least a calculus sequence and differential equations. Secondary education majors should have completed the calculus sequence and courses in geometry and algebra. If a student is admitted with deficiencies, he or she will be expected to make up the deficiencies during the first year.

The master of science degree may be taken with or without a thesis — no examination is required. Under the nonthesis option for pure and applied mathematics majors the minimum amount of coursework is 45 quarter hours, half of which should be earned in course sequences numbered 600 or higher. If most or all of the student's work is on the 500 level, the graduate committee may require more than 45 hours, but not over 60. The coursework should include at least two mathematics sequences; for example, algebra, analysis, topology, etc.

MALAYSIAN

(See Foreign Languages and Literatures)

Under the nonthesis option in computer science a student is expected to take one sequence in mathematics and at least one sequence in computer science. Candidates for this degree should expect to take 55 hours including at least 30 hours of computer science.

The Department of Mathematics together with the College of Education offers a joint program for secondary school teachers. The master's degree may be taken either in the College of Education or in the Department of Mathematics. A student taking this program should expect at least half of his or her credits to be earned in mathematics. Topics studied are geometry, algebra, number theory, and analysis. A minimum of 50 hours is required.

There are no specific courses required for the Ph.D. degree, but each student must pass a comprehensive examination and write an acceptable dissertation.

The dissertation is expected to be a scholarly work demonstrating the student's ability to understand, organize, improve, and present mathematical ideas of outstanding importance, depth, or interest. It should be worthy of publication.

The Department of Mathematics encourages its students to develop the ability to read mathematics in those languages which predominate the literature of the discipline. Students in post-master's courses will be expected to understand mathematics written in one or more of the following languages: French, German, or Russian.

All graduate-level computer science courses, except for 521, 522, and 599, may be used to satisfy requirements for a graduate degree in mathematics.

Qualified applicants may apply for admission for any quarter. Applicants for financial aid for the following academic year must submit application materials by March 1, although late applications will be considered if vacancies exist.

500 History of Mathematics (5)

Prereq: grad rank. Main lines of mathematical development in terms of contributions made by great mathematicians: Euclid, Archimedes, Descartes, Newton, Gauss, etc.

506 Foundations of Mathematics (5)

Prereq: grad rank. Introductory topics in set theory and axiomatic development of real number system.

507 Number Theory (5)

Prereq: 307 or perm. Topics in number theory.

510 Matrix Theory (5)

Prereq: grad rank. Primarily intended for science and engineering majors. Topics include matrix algebra and matrix calculus, matrix solutions of systems of linear equations, eigenvector and eigenvalue problems, quadratic forms, and inner product spaces.

511 Linear Algebra (5)

Prereq: grad rank. Vector spaces and linear transformations; matrices and determinants; characteristic roots and similarity; dual spaces; classification of quadratic and Hermitian forms.

513A Introduction to Modern Algebra (5)

Prereq: 511 or equiv mathematical maturity. Groups, permutation groups, subgroups, normal subgroups, quotient groups. Conjugate classes and class equation formula and its application to p-groups. Fundamental theorem on homo-morphisms.

513B Introduction to Modern Algebra (5)

Prereq: 513A. Fundamental theorem on finite abelian groups and its consequences. Cauchy theorem and first Sylow theorem. Polynomial rings. UFD and Euclidean domains. Maximal ideals. Algebraic extensions and splitting fields. Fundamental theorem of Galois theory.

529 Topics in Mathematics of Elementary and Secondary Schools (1-5)

Prereq: perm and grad rank. Selected topics related to teaching of mathematics in grades K-12. (May be repeated for credit.)

539 Topics in Geometry (1-5)

Prereq: perm of grad chairman and instructor. When demand sufficient, course in some phase of geometry will be offered under this number. (May be repeated for credit.)

540 Vector Analysis (5)

Prereq: grad rank. Vector algebra and its applications. Vector calculus and space curves. Scalar and vector fields, gradient, divergence, curl, and Laplacian. Line and surface integrals, divergence theorem, Stoke's theorem and Green's theorem.

541 Fourier Analysis and Partial Differential Equations (5)

Prereq: grad rank. Representation of functions as sums of infinite series of trigonometric functions, Bessel functions, Legendre poly-

nomials, or other sets of orthogonal functions. Use of such representations for solution of partial differential equations dealing with vibrations, heat flow, and other physical problems.

542 Theory of Linear and Nonlinear Programming (5)

Prereq: 510 or equiv, computer programming experience desirable. Minimization of functions subject to equality and inequality constraints. Kuhn-Tucker theorem, algorithms for function minimization, such as steepest descent and conjugate gradient, and penalty function method. (Not a course in computer programming.)

543 Mathematical Modeling and Optimization (5)

Prereq: 211, 340, or 410, FORTRAN. Differential equation models of wide variety of physical, social, and biological phenomena presented. Qualitative analysis introduced and used to investigate models. Optimal criteria incorporated to convert models to optimal control problems. Pontriagin's maximal principle used to find analytic solutions. Numerical solutions to optimal control problems also treated.

544 Introduction to Numerical Analysis (5)

Prereq: CS 521 and undergrad course in differential equations. Numerical methods in: polynomial interpolation and approximations, integration and differentiation, finding solutions to differential equations, matrix inversion, determination of eigenvalues, and finding solutions of systems of equations.

545 Advanced Numerical Methods (4)

Prereq: 541 and 544 or EE 778 and CHE 501. Initial and boundary value problems; numerical solutions of parabolic, elliptic, and hyperbolic equations; stability; error estimates; applications to engineering problems. (Also offered as ET 545).

550A Theory of Statistics (5)

Prereq: grad rank. Probability distributions of 1 and several variables, sampling theory, estimation of parameters, confidence intervals, analysis of variance, correlation and testing of statistical hypotheses.

550B Theory of Statistics (5)

Prereq: 550A. Continuation of 550A. See 550A for description.

550C Theory of Statistics (5)

Prereq: 550B. Continuation of 550B. See 550A for description.

560A Advanced Calculus (5)

Prereq: grad rank and undergrad course in introductory analysis. Critical treatment of functions of single variable. Emphasis placed on topics not treated in undergrad introductory analysis course, such as compactness, nested intervals, deeper properties of continuous functions, Riemann-Stieltjes integration, and uniform convergence.

560B Advanced Calculus (5)

Prereq: 560A and 511. Primarily devoted to study of differential calculus in n-space. Topics include review of inner product spaces and linear transformations, elementary topology of plane, limits and continuity of functions of several variables, directional derivative, differential, chain rule, and implicit function theorem.

560C Advanced Calculus (5)

Prereq: 560B. Primarily devoted to study of integral calculus in n-space. Riemann-Darboux integral, Jordan content, iterated integrals, transformation of integrals, differential forms and their integrals.

570 Applied Complex Variables (5)

Prereq: grad rank. Analytic and harmonic functions, Cauchy integral and residue theorems, contour integration, Taylor and Laurent expansions, conformality and linear transformations with applications.

580A Elementary Point Set Topology (5)

Prereq: grad rank. Topology of Euclidean spaces and general metric spaces.

580B Elementary Point Set Topology (5)

Prereq: 580A. Introduction to general topological spaces.

599 Selected Topics in Mathematics (1-15)

Prereq: perm of grad chairman. (May be repeated for credit.)

600A Set Theory (5)

Prereq: perm. Introduction to axiomatic set theory; ordinals and cardinals; equivalents of axiom of choice.

600B Set Theory (5)

Prereq: 600A. Continuation of 600A. See 600A for description.

613A Abstract Algebra (5)

Prereq: 513B. Groups, rings and fields, Jordan-Holder theorem, structure theorem for finitely generated abelian groups, integral

domains, principal ideal rings, modules, linear algebras, field extensions, and Galois theory.

613B Abstract Algebra (5)

Prereq: 613A. Continuation of 613A. See 613A for description.

613C Abstract Algebra (5)

Prereq: 613B. Continuation of 613A-B. See 613A for description.

641A Methods of Applied Mathematics (5)

Prereq: 560C, 510, 340; or perm. Course contents vary. (May be repeated for credit.)

641B Methods of Applied Mathematics (5)

Prereq: 641A or perm. Course contents vary. (May be repeated for credit.)

641C Methods of Applied Mathematics (5)

Prereq: 641B or perm. Course contents vary. (May be repeated for credit.)

642A Optimization Theory (5)

Prereq: 560A,B,C; 510; and 340 or perm. Classical problems of calculus of variation; Euler-Lagrange, Dubois-Reymond, Legendre, and Weierstrass necessary conditions; formulation of classical problems as nonlinear programming problems in function space.

642B Optimization Theory (5)

Prereq: 642A, 660C, FORTRAN or perm. Numerical solutions of boundary value problems; formulation and solution of optimal control problems with set, equality, and inequality constraints; applications to economics, classical mechanics, and engineering.

642C Optimization Theory (5)

Prereq: 642B. Pontriagin's maximal principle is derived and applied to optimal control problems. Numerical solutions considered more fully.

660A Real Analysis (5)

Prereq: 560C. Abstract measure and integration; Lebesgue measure on real line; L_p -spaces; Fubini and Radon-Nikodym theorems; differentiation theory.

660B Real Analysis (5)

Prereq: 660A. Continuation of 660A. See 660A for description.

660C Real Analysis (5)

Prereq: 660B. Continuation of 660A-B. See 660A for description.

670A Complex Analysis (5)

Prereq: 560A and perm. Analytic functions, multivalued analytic functions, power series, complex integration, Cauchy integral theorem, its extensions and consequences. Residue theorem, Taylor and Laurent expansions, max-modulus principle and its generalizations, elementary conformal mapping, conformal representations, Riemann surfaces, Weierstrass and Mittag-Leffler's factorization theorems, simple periodic functions, simple properties of elliptic functions, Dirichlet problem.

670B Complex Analysis (5)

Prereq: 670A. Continuation of 670A. See 670A for description.

670C Complex Analysis (5)

Prereq: 670B. Continuation of 670A-B. See 670A for description.

680A Point Set Topology (5)

Prereq: 560C. General topological spaces, product and quotient spaces, convergence, separation, countability properties, compactness and paracompactness, connectivity, metric spaces, completion, metrization, completely regular spaces, uniform spaces.

680B Point Set Topology (5)

Prereq: 680A. Continuation of 680A. See 680A for description.

680C Point Set Topology (5)

Prereq: 680B. Continuation of 680A-B. See 680A for description.

690 Independent Study (1-15)

Prereq: perm of grad chairman. Independent study of topics under guidance of faculty member. (May be repeated for credit.)

695 (MS) Thesis (arranged)

Prereq: perm of grad chairman. (May be repeated for credit.)

699 Topics in Mathematics (1-15)

Prereq: perm of grad chairman. (May be repeated for credit.)

710A Group Theory (5)

Prereq: 613C. Abelian groups, permutation groups, Sylow theorems, solvable groups, group extensions, free groups and free products, group representation and characters.

710B Group Theory (5)

Prereq: 710A. Continuation of 710A. See 710A for description.

711A Theory of Rings and Modules (5)

Prereq: 613C. Rings with minimum condition, Wedderburn theo-

rems, Jacobson radical, Jacobson density theorem, commutativity conditions, algebras, Goldie theorems, modules, and chain conditions.

711B Theory of Rings and Modules (5)

Prereq: 711A. Continuation of 711A. See 711A for description.

740A Ordinary Differential Equations (5)

Prereq: 560C, 511, 340 or perm. Existence and unique theorems, linear systems, autonomous systems, periodicity, boundedness and stability of solutions, nonlinear equations, perturbation theory, Sturm-Liouville systems, behavior of singularities, etc.

740B Ordinary Differential Equations (5)

Prereq: 740A or perm. Continuation of 740A. See 740A for description.

740C Ordinary Differential Equations (5)

Prereq: 740B or perm. Continuation of 740A-B. See 740A for description.

741A Partial Differential Equations (5)

Prereq: 740A, 570, or perm. Cauchy-Kowalewski theorem, existence and regularity of solutions, Dirichlet problem for linear elliptic equations, Cauchy problem, hyperbolic equations, fundamental solutions of linear equations with constant coefficients, quasilinear systems, nonlinear equations, etc.

741B Partial Differential Equations (5)

Prereq: 741A or perm. Continuation of 741A. See 741A for description.

741C Partial Differential Equations (4)

Prereq: 741B or perm. Continuation of 741A-B. See 741A for description.

761A Functional Analysis (5)

Prereq: 660A or perm. Normed linear spaces, Hilbert spaces, Hahn-Banach extension theorems, Banach-Steinhaus theorem, closed graph theorem, applications to differential and integral equations.

761B Functional Analysis (5)

Prereq: 761A. Topics selected from spectral theory, Banach algebras, integration in Banach spaces, linear topological vector spaces; and other topics.

761C Functional Analysis (5)

Prereq: 761B. Continuation of 761B. See 761B for description.

780A General Topology (5)

Prereq: 680C. Continuation of main line of development of 680A-B-C, but at deeper and more advanced level. Offered especially for those students who intend to specialize in general topology.

780B General Topology (5)

Prereq: 780A. Continuation of 780A. See 780A for description.

780C General Topology (5)

Prereq: 780B. Continuation of 780A-B. See 780A for description.

809 Topics in the Foundation and History of Mathematics and in Number Theory (1-15)

Prereq: perm of grad chairman. Selected topics not offered in normal course offerings. (May be repeated for credit.)

819 Topics in Algebra (1-15)

Prereq: perm of grad chairman. Detailed study of advanced topics not covered in other algebra courses. (May be repeated for credit.)

829 Topics in the Teaching of Mathematics (1-15)

Prereq: perm of grad chairman. Selected topics not covered in regular course offerings. (May be repeated for credit.)

839 Topics in Geometry (1-15)

Prereq: perm of grad chairman. Selected topics not covered in regular offerings. (May be repeated for credit.)

849 Topics in Applied Mathematics (1-15)

Prereq: perm of grad chairman. Selected topics not covered in regular offerings. (May be repeated for credit.)

859 Topics in Probability, Statistics, and Stochastic Processes (1-15)

Prereq: perm of grad chairman. Selected topics not covered in regular offerings. (May be repeated for credit.)

869 Topics in Real Analysis (1-15)

Prereq: perm of grad chairman. Selected topics not covered in regular offerings. (May be repeated for credit.)

879 Topics in Complex Analysis (1-15)

Prereq: perm of grad chairman. Special topics not ordinarily covered in other courses. (May be repeated for credit.)

889 Topics in Topology (1-15)

Prereq: perm of grad chairman. Special topics not covered in other courses. (May be repeated for credit.)

890 Independent Study (1-15)

Prereq: perm of grad chairman. Independent study under guidance of faculty member. (May be repeated for credit.)

891 Seminar (1-15)

Prereq: perm of grad chairman. (May be repeated for credit.)

895 Dissertation (arranged)

Prereq: perm of grad chairman. (May be repeated for credit.)

MECHANICAL ENGINEERING

(See Engineering, Mechanical)

MODERN LANGUAGES

(See Foreign Languages and Literatures)

MUSIC

History and Literature
Independent Study
Music Education
Performance
Theory and Composition

ADMISSION

To begin a graduate program in music, a student is required to have completed, with at least a 2.5 accumulative average, an undergraduate curriculum in music from an accredited institution offering an undergraduate degree equivalent to the requirements of the National Association of Schools of Music. Music education students not holding standard certification must earn Ohio certification.

Personal auditions and interviews should be arranged by all candidates. (Taped auditions will be accepted only if a personal audition is difficult or impossible.) Candidates in composition must submit scores and, if possible, include tapes.

After admission has been granted, placement examinations are given to all entering graduate students during registration week of the first quarter of enrollment. An incoming student is required to demonstrate performance ability on his or her principal instrument, and take a proficiency test in theory and history and literature of music. The results of these placement tests are used in planning the student's course of study. Applied majors must demonstrate graduate level performance proficiency. Deficiencies in undergraduate preparation should be removed during the first year of study.

Qualified applicants may apply for admission to the School of Music graduate programs for any quarter. All application materials must be submitted 30 days prior to the quarter in which the student plans to begin his or her graduate program. Students seeking financial aid for the following academic year must submit application materials by May 1.

GENERAL REQUIREMENTS

Programs leading to the master of music degree, requiring a minimum of 45 quarter hours of graduate work, are offered in applied music (performance), theory and composition, and music history and literature. A thesis or its equivalent is required in all programs except in music education where a 48-quarter-hour (minimum) nonthesis option is available. Each major in applied

music performs a public recital, while majors in composition present compositions in a large form in lieu of a thesis. In addition to the 45 quarter hours required for the M.M. degree, students in voice (performance) are required to demonstrate skill in German, French, and Italian diction. Students in music history are required to demonstrate reading ability in at least one foreign language. An oral examination is required of each candidate.

MASTER OF MUSIC PROGRAMS

Master of Music in Performance

The M.M. in performance degree in music is designed for professionally oriented performers, studio and school music teachers who wish to pursue this curriculum as a terminal degree, or those who wish to use it as a foundation for doctoral study. The principal goal is to prepare graduate students, both technically and intellectually, for professional careers as performers or as artist-teachers. Acceptance into the master of music in performance is by audition only.

Within the area of performance, the student may elect a master of music degree in performance with emphasis in pedagogy. Areas of concentration in this degree program are: strings, woodwinds, and piano. The goal of the program in strings and woodwinds is to prepare students for teaching in colleges, public schools, and private studios. A greater emphasis is given to pedagogy and pedagogical techniques, including teaching methods and materials, than in the traditional performance curriculum. In addition to the above program goals, students in piano experience group and private piano instruction.

An audition is required on the major instrument for admission to these programs. (It is advantageous to have previous experience on at least one other family instrument in woodwinds and strings.)

Master of Music in Music Education

The M.M. degree in music education provides an opportunity to pursue advanced practical and theoretical studies in the field of music education. Although the focus of the program is upon preparation to be a more skillful teacher, many options are possible, including preparation for music administration and supervision. The degree program prepares students for permanent certification as well as for doctoral study leading to college teaching. The coursework is divided equally between music education and other areas such as music theory, music history, jazz studies, and applied music (including conducting). Some candidates elect related coursework in business, educational administration, theater, or comparative arts.

Master of Music in Theory, Composition, History and Literature

The master of music degree is offered in music theory, composition, and music history and literature. Although each of these degree programs requires a minimum of 45 quarter hours of graduate work, within each program of study there is available a variety of course offerings that will enable the graduate student to design a program best suited to his or her individual professional needs.

Within the 45-quarter-hour graduation requirement, the M.M. in music theory and the M.M. in music history and literature each requires a written thesis. In addition, the student in music history is required to demonstrate reading ability in at least one foreign language. The M.M. in composition requires a large-scale composition in lieu of the thesis. All degree programs in the theory-composition-music history and literature area require an oral examination of the degree candidate.

History and Literature

521 History of Musical Styles (3)

History of musical styles from early Christian era to present.

D.

522 History of Musical Styles (3)

Prereq: 521. Continuation of 521. See 521 for description.

D.

523 History of Musical Styles (3)

Prereq: 521, 522. See 521 for description.

D.

524 Literature of — (3)

(a) vocal music; (b) piano music; (c) chamber music; (d) orchestral music; (e) organ music; (f) opera music; (i) orchestral instruments.

A.

527 Folk Music in the United States (3)

Introduction to selected types of folk music in U.S.

Y.

528 Jazz History (3)

Various musics collectively known as jazz. Exploration of rhythmic, melodic, and harmonic features with emphasis upon Blues, Dixieland, Ragtime, Boogie Woogie, Swing, Bop, Cool Jazz, and Contemporary Jazz.

Y.

531 Ancient and Medieval Music (4)

Prereq: perm. Music as artistic and theoretical expression of antiquity and Middle Ages, history of musical styles to 1410.

A.

532 Music of the Renaissance (4)

Prereq: perm. Musical styles ca. 1410 to ca. 1600.

A.

533 Music of the Baroque Period (4)

Music of age of concertato and basso continuo (ca. 1600-1750).

A.

534 Music of the Classic Period (4)

Prereq: perm. Music styles of Rococo and Classicism through 1st qtr of 19th century.

A.

535 Music of the 19th Century (4)

Prereq: perm. Music as artistic expression of 19th century Romanticism.

A.

536 Contemporary Music (4)

Prereq: perm. Music as artistic expression of our time. Various styles since ca. 1900.

A.

537 Analysis of Music Notation (3)

Prereq: perm. Gregorian through Medieval modal notation.

F; D.

538 Analysis of Music Notation (3)

Prereq: 537. Franconian and Ars Nova notation systems.

W; D.

539 Analysis of Music Notation (3)

Prereq: 538. Continuation of 538.

Sp; D.

Independent Study**600 Independent Study (1-15)**

Prereq: perm.

F, W, Sp, Su, Y

620 Seminar in Theory and Music History and Literature (3, max 9)

Individual studies of problems in music history and theory. Methods of music research and use of music bibliography.

F, Y

673 Acoustics for Musicians (3)

Study of room, concert hall, and stadium acoustics and vibration of strings, rods, plates, and air columns as these principles are related to music teaching and performance. Also, study of temperaments of musical scales, intonation, and psychology of music. Individual research projects required.

D.

695 Thesis (as recommended by dept) (1-6)

Y

Music Education**563 Instrumental Techniques and Materials (4)**

Advanced techniques for high school and college instrumental groups. Literature and materials.

Damron; Sp; Y.

564 Marching Band Techniques (3)

Prereq: perm. Techniques for preparation of high school and college marching band performance.

Socciarelli; Sp; Y.

565 Choral Techniques and Materials (4)

Advanced techniques for high school and college vocal groups. Literature and materials.

Powell; Sp; Y.

566 Problems in Elementary Music (3)

Prereq: perm. Advanced course in techniques and materials for elementary music teaching such as Orff and Kodaly.

Scholten; F; Y.

568 General Music in Junior High (4)

Prereq: perm. Advanced course in techniques and materials for junior music teaching such as team teaching, learning stations, and humanities.

Gagliano; W; Y.

576 Workshops and Institutes (1-4)Prereq: perm. (a) music clinic-workshop, (b) elementary music workshop, (c) chamber music institute. *May be repeated for credit, but credit may be applied to degree electives only once for each workshop.*

Staff; D.

581 Psychological Foundations of Music (3)

Prereq: perm. Basic study of acoustics, ear and hearing. Psychological, sociological, and physiological processes involved in musical behavior.

Fink; W; Y.

670 Contemporary Trends in Music Education (4)

Problems, objectives, and current practices in music education and related fields.

Fink; Sp; Y.

671 Advanced Topics in Music Education (4)

Prereq: perm. Various topics in music education such as current methods of measuring aptitude and achievement in music and brief survey of elementary statistics used in music education research.

Fink; W; Y.

672 Advanced Topics in Music Education (4)

Prereq: perm. Various topics such as philosophical foundations of esthetics as applied in music education curricula of contemporary societies.

Scholten; Sp; Y.

675 Introduction to Graduate Studies in Music Education (3)

Introduction to grad study and research methods in music education. Individual studies and discussion of problems in music education.

Scholten; F; Y.

677 Organization and Administration of School Music (3)

Prereq: perm. Administration and supervision of school music programs. Role of supervisor, consultant, director or coordinator of music in public schools. Personnel, materials and equipment, finance, curriculum, in-service training, and community-school relationships.

Damron; W; Y.

Performance**540 Voice (1-6)**

Prereq: perm.

Staff, F, W, Sp, Y

541 Piano (1-6)

Prereq: perm.

Staff, F, W, Sp, Y

542 Stringed Instruments (1-6)

Prereq: perm.

Staff, F, W, Sp, Y

543 Woodwind Instruments (1-6)

Prereq: perm.

*F, W, Sp; Y.***544 Brass Instruments (1-6)**

Prereq: perm.

*Staff; F, W, Sp; Y.***545 Percussion Instruments (1-6)**

Prereq: perm.

*Staff; F, W, Sp; Y.***546 Organ (1-6)**

Prereq: perm.

*F, W, Sp; Y.***547 Ensemble (1-2, max 6)**

Prereq: perm.

*F, W, Sp; Y.***548 Accompanying (1, max 3)**

Basic problems in accompanying singers and instrumentalists — rehearsal techniques, ensemble, pedaling, balance, etc. May be repeated.

*W, Sp; Y.***557 Solo Repertoire (1)**

Prereq: perm. Representative selections from standard and 20th century repertory; problems of technique, interpretation, style, accompaniment, and ensemble. (A) string instruments; (B) vocal; (C) woodwind instruments; (D) brass or percussion instruments; (E) keyboard.

*Staff.***558 Pedagogy (2)**

Prereq: perm. Methods and materials of teaching fundamentals of instruments. Lec, class performance, teaching demonstration and library research. (A) string instruments; (B) woodwind instruments; (C) brass or percussion instruments; (D) vocal.

*Staff.***559A Advanced Conducting (3)**

Prereq: perm. Advanced reading and conducting of large works for orchestra.

*F; Y.***559B Advanced Conducting (3)**

Prereq: perm. Advanced reading and conducting of large works for choir. Standard and new works for public school and college groups.

*Sp; Y.***572 Advanced Group Instruction in Functional Piano (2)**

Prereq: piano classification 243. For pianists, emphasizing development of: keyboard skills, harmonizing, transposing, sight-reading, etc., that students will encounter as piano teachers, music educators, or music therapists. (May be repeated.)

*Sp; Y.***590 Piano Pedagogy (2)**

Practical course aimed at providing creative teaching strategies for piano teacher. Teaching philosophies, objectives, and procedures discussed and applied to group, class, and private piano instruction. Includes teaching techniques for working with students of all ages and levels. (May be repeated.)

*F, W, Sp; Y.***695A Recital (0)**

Prereq: perm. Full-length public recital, a recording of which will be filed in library.

Staff; F, W, Sp; Y.

Theory and Composition

500 Introduction to Music Theory (3)

Prereq: grad rank, nonmusic major. Introduction to music theory: staff, pitch and rhythmic notation, chords, pop music notation, etc.

*Y.***501 Theory Survey (3)**

Survey of harmonic usage in common practice period.

*Y.***502 Theory Survey (3)**

Grad review. Analysis of musical form.

*Y.***505 Teaching of Theory (3)**

Prereq: perm. Designed to meet needs of student who plans to teach theory at college level. Current materials and pedagogical approaches surveyed.

*D.***506 Teaching of Theory (3)**

Prereq: 505. Continuation of 505. See 505 for description.

*D.***507 Counterpoint I (3)**

Prereq: perm. 16th century counterpoint; practices and styles; Lassus and Palestrina.

*F; A.***508 Counterpoint II (3)**

Prereq: perm. 18th century counterpoint: invention, canon, fugue.

*W; A.***510 Composition (3)**

Prereq: perm. Extensive writing in larger vocal and instrumental forms.

*Y.***511 Composition (3)**

Prereq: 510. Continuation of 510. See 510 for description.

*Y.***512 Composition (3)**

Prereq: 511. Continuation of 510-511. See 510 for description.

*Y.***513 Advanced Orchestration (2)**

Prereq: perm. Problems in scoring original works for modern symphony orchestra. Satisfactory scores performed by Ohio University Symphony Orchestra.

*D.***514 Advanced Orchestration (2)**

Prereq: 513. Continuation of 513. See 513 for description.

*D.***515 Advanced Orchestration (2)**

Prereq: 514. Continuation of 513-514. See 513 for description.

*D.***516 Styles I (3)**

Prereq: perm. Analysis of 15th century music.

*F; A.***517 Styles II (3)**

Prereq: perm. Analysis of post-Romantic music.

*W; A.***518 Styles III (3)**

Prereq: perm. Analysis of 20th century music.

*Sp; A.***519 Techniques of Variation (3)**

Prereq: perm. Analysis and writing of variations.

*Sp; A.***525 Jazz Harmony I (3)**

Harmonic vocabulary, notational systems, chord progressions, structures, and techniques in traditional jazz.

*D.***526 Jazz Harmony II (3)**

Continuation of 525.

*D.***616 Evolution of Harmonic Theory (3)**

Prereq: perm. Writings of most important music theorists from 10th century to present.

*F; A.***617 Evolution of Harmonic Theory (3)**

Prereq: 616. Continuation of 616. See 616 for description.

*W; A.***618 Evolution of Harmonic Theory (3)**

Prereq: 617. Continuation of 616-617. See 616 for description.

Sp; A.

OHIO PROGRAM OF INTENSIVE ENGLISH (OPIE)

OPIE 565 is a service program for nonnative speakers whose proficiency in English is not adequate to permit them to enroll in an unrestricted program of academic courses. *Credit hours for the*

courses of this program are for visa validation and tuition assessment only and are not applicable to degree requirements. Enrollment in OPIE 565 for 15 hours is for full-time intensive study of English as a foreign language beginning at introductory, intermediate, or advanced level. Initial enrollment at introductory level presumes continuation at intermediate level for a total of 20 weeks of full-time intensive study. No credit courses may be taken concurrently with full-time intensive English. Enrollment in OPIE 565 for eight or twelve hours is for part-time semi-intensive supplementary study of English for students concurrently enrolled in a part-time program of degree credit courses.

Introductory/intermediate level full-time intensive English. Five classroom practice and recitation hours daily, plus individually scheduled required language laboratory practice. Primary emphasis on developing mastery of spoken English. Registration for 15 quarter hours.

Advanced level full-time intensive English: Prerequisite: advanced proficiency level. Five classroom practice and recitation hours daily, plus individually scheduled required language laboratory practice. Emphasis on both spoken and written English usage. May follow introductory level. May be initial enrollment with required proficiency. Registration for 15 quarter hours.

Semi-intensive supplementary English: Prerequisite: advanced proficiency level. Two or three hours of classroom practice and recitation daily. Emphasis on both spoken and written English usage. Registration for eight or twelve quarter hours.

099 Independent study for graduate students needing work in a specific area (e.g., pronunciation speaking skills course for T.As) Credit earned applies toward registration, but not the student's degree.

565 English as a Foreign Language (8-15)

Full-time intensive or part-time semi-intensive English for nonnative speakers.

Staff; F, W, Sp, Su; Y

PHILOSOPHY

Only students who have received a 3.0 (B) average in their undergraduate courses in philosophy and a 2.5 average in other undergraduate courses will be admitted into the master's program. It is recommended that for beginning a graduate major a student have taken at least 27 quarter hours in philosophy. Students who have not had a course in each of ethics, symbolic logic, ancient philosophy, and modern philosophy, must take courses in these areas during the first two quarters in residence.

The master of arts degree in philosophy is granted upon the satisfaction of either of two sets of requirements:

The thesis plan involves completion of 45 quarter hours, including one course from each of two of the following three groups: A. 518 Plato, 519 Aristotle; B. 528 Continental Rationalism, 529 British Empiricism, 538 Kant; C. 514 Analytic Philosophy, 548 Pragmatism, 558 Contemporary German Philosophy, 559 Contemporary French Philosophy, 568 Phenomenology; and one course from each of the following: (1) 530 Contemporary Ethical Theory, 531 History of Esthetic Philosophy, 532 Problems of Esthetics, 540 Contemporary Social Philosophy; (2) 516 Philosophy of Science, 520, 521, 522, 523, 524 (advanced logic courses), 550 Theory of Knowledge, 551 Metaphysics, and submission of an acceptable thesis.

The comprehensive examination plan requires completion of 45 quarter hours and passing comprehensive examinations on selected readings.

502 Techniques of Formal Analysis (5)

Philosophical application of techniques of modern symbolic logic.

Staff F, W, Sp, Y

514 Analytic Philosophy (5)

Selected topics in contemporary Anglo-American philosophy

Smith, D

516 Philosophy of Science (5)

Analysis of selected problems in logic and methodology of sciences

Ruchti, Sp, A

517 Philosophy of Logic (5)

Prereq: 320 or 502 Problems surrounding attempt to bring order into our account of logic, nature of propositions, logical form,

proper names; fictional entities; ontological commitment; modality, etc.

Staff; D.

518 Plato (5)

Wieman; F; A.

519 Aristotle (5)

Organ; F; A.

520 Symbolic Logic II (5)

Prereq: perm. First order logic as a basis for theory construction and analysis.

Butrick; Sp; Y.

521 Proof Theory (5)

Prereq: 320 or equiv. Syntax and semantics of formal theories.

Butrick; D.

522 Computation Theory (5)

Algorithms, recursive functions, Turing machines, decidability.

Butrick; D.

523 Modal and Many-Valued Logics (5)

Prereq: 320 or 502. N-valued logics, modal logic.

Corrado; D.

524 Foundation Theory (5)

Prereq: 320 or equiv. Axiomatic set theory as a basis for concept formation and theory construction.

Butrick; D.

528 Continental Rationalism (5)

Descartes, Spinoza, Leibniz.

Staff; D.

529 British Empiricism (5)

Locke, Berkeley, Hume.

Wieman; F; A.

530 Contemporary Ethical Theory (5)

Current literature in selected topics in moral philosophy.

Trevas; A.

531 History of Esthetic Theory (5)

Readings from Plato to Dewey and relation of these theories to selected arts and recent criticism.

Blocker; Y.

532 Problems in Esthetics (5)

For students interested in the arts but not necessarily in issues primarily of interest to philosophers. Writing drawn from modern sources on theory of art, esthetic criticism, creativity, truth in art, and esthetic value.

Blocker; Y.

538 Kant (5)

Kant's *Critique of Pure Reason* with attention given to his ethical theory.

Stewart; A

540 Contemporary Social Philosophy (5)

Consideration of any of various issues in contemporary social, political, and legal philosophy. Examples of topics which might be included are: theories of distributive justice, culpability, causality and responsibility, legal and moral rights, etc.

Smith, D.

542 Philosophy of Law (5)

Consideration of nature and justification of law and examination of some specialized topics in philosophy of law including ascription of responsibility, civil disobedience, theories of punishment, liberty, etc.

Smith, Y.

544 Philosophy of Marxism (5)

Philosophical inquiry into classical and contemporary Marxist thought stressing Marx, Engels, Lenin, Stalin, Mao, and several contemporary Marxists such as the "Praxis group" of Yugoslavia.

Borchert, Mickunas; A

548 Pragmatism (5)

Peirce, James, Dewey.

Trevas, D

550 Theory of Knowledge (5)

Critical examination of various views of what knowledge is and how it is attained.

Ruchti, F, Y

551 Metaphysics (5)

Basic alternative conceptions of world, and such topics as substance, causality, self, freedom, space, and time.

Wieman, W, Y

552 Myth and Symbolism (5)

Review of theories concerning nature of mythology and symbolic process. Analysis of selected myths and symbols in various religions, literature, and art.

Weckman; Y.

558 Contemporary German Philosophy (5)

Analysis of themes in Husserl, Heidegger, Scheler, Hartman, Dilthey, Cassirer, Gebser, and Ingarden, stressing phenomenological roots as well as new philosophic directions.

Mickunas; Sp; A.

559 Contemporary French Philosophy (5)

Trends in contemporary French philosophy, stressing Sartre, Camus, Marcel, Merleau-Ponty, and Ricoeur, emphasizing existential backgrounds of French thought and its adaptation of existential themes.

Stewart; Sp; A.

560 Contemporary Religious Thought (5)

Problem of God; relation of faith and reason; human destiny; religious language — in thought of representative theologians and philosophers such as Tillich and Buber.

Grean; Sp; Y.

568 Phenomenology (5)

Method and philosophy of phenomenological movement from Husserl to Merleau-Ponty.

Mickunas; W; Y.

570 Hinduism (5)

Vedic religion, Hinduism, Jainism.

Weckman; Y.

571 Buddhism (5)

Introduction to doctrines, origins, and varieties.

Weckman; Y.

572 Islam (5)

Introduction to core ideas.

Weckman; Y.

575 Chinese Philosophy (5)

Major Chinese philosophers and schools of thought from earliest times to present day.

Staff; D.

576 Indian Philosophy (5)

Classical Hinduism.

Staff; D.

577 Buddhist Philosophy (5)

Abhidharmika, Madhyamika, Yogacara, Zen, and other philosophical doctrines of Buddhism.

Staff; D.

579 Religion Studies in Public Education (3)

Aims, attitudes, and methods of various kinds of religious study.

Weckman; D.

690 Supervised Teaching (2)

Supervised experience, including observation, discussion, and counsel.

Staff; F, W, Sp, Su; Y.

691 Seminar in Philosophy (1-15, max 15)

Selected problems.

Staff; D.

692 Special Studies (1-15, max 15)

Prereq: perm. Advanced study of philosopher, movement, or problem, to provide intensified training in area of concentration related to but not necessarily that of student's thesis.

Staff; F, W, Sp, Su; Y.

695 Thesis (1-15, max 15)

Staff; F, W, Sp, Su; Y.

PHOTOGRAPHY

(See Art, Photography)

PHYSICAL EDUCATION

(See Health and Sport Sciences)

PHYSICS AND ASTRONOMY

Graduate study and research leading to the master of arts, master of science, and the doctor of philosophy degrees are offered in physics. The principal research activities of the department extend over planetary physics, molecular physics, elementary particles, nuclear physics, ultrasonics, low temperature, and solid state physics. Both experimental and theoretical studies are in progress in most of these areas; there is also theoretical work in many-body problems, and nonlinear problems in classical and quantum physics. Special programs of graduate work outside these areas, or fully interdisciplinary programs, can in appropriate cases be devised to suit particular interests.

Students who plan to enter these degree programs are normally expected to have concluded successful undergraduate work in mechanics, electricity and magnetism, thermodynamics, optics, atomic and nuclear physics, and quantum mechanics, and should also possess a working knowledge of mathematics comprising calculus, Fourier series, vector analysis, and the elements of partial differential equations. It is recommended that applicants take the Graduate Record Examination, including the advanced test for physics. Deficiencies of undergraduate preparation should not deter a prospective student with an otherwise good record, as these may be made up during the first year of graduate study.

The program of study is developed for each student in close consultation with faculty advisors. Emphasis is given both to individual needs and to general, broad requirements; early specialization is not encouraged. The following core courses are recommended to all students in their first two years of graduate study: 531, 601, 605-606, 607-609, 610-612, 615-616, 623, and 735-736. Courses in related areas such as chemistry, engineering, mathematics, and computer science are often included in the program. Participation in the weekly colloquium, 891, is required of all graduate students. Professionally useful coursework may also be done further afield, as in business administration, economics, or interpersonal communication.

The M.S. degree can be earned by submission of a research thesis, with an oral examination. It can also be obtained under a nonthesis option which nonetheless requires satisfactory completion of a work project (laboratory assignment, literature search, essay, etc., at two to six credits), and must include the courses 605-606, 607-609, 610-612, 615 and 623, or their equivalents. The M.A. in physics is an option reserved for particular cases which may also call for substantial work in other fields; candidates must follow an approved program filed with the Physics Graduate Committee and submit a scholarly paper based on these studies for approval by at least two readers. For every master's degree, 45 graduate credits in physics and approved electives are required.

No fixed number of credits is required for the Ph.D., but the student must first pass a comprehensive examination which consists of a written part and an oral part, usually taken towards the end of the second year of graduate study (the first year for a student entering with an M.S. degree from a recognized U.S. institution). Doctoral research is conducted under the supervision of an advisor and reviewed periodically by each student's dissertation committee. A final oral examination is held on the subject matter of the dissertation.

It is the policy of the department to encourage students to acquire and develop some knowledge of those foreign languages which are commonly used in the literature of physics and related sciences. Students will be guided by their advisors in the matter of which languages they could most usefully study. For the Ph.D. degree, a student must display an adequate reading knowledge of at least French, German, or Russian.

There are no specific deadlines but most applications for financial aid are received by March 1 and most offers are made by April 15. Most students enter the physics program in the fall; some also add the preceding summer session. Entry during the academic year is possible although not generally encouraged. For all details concerning graduate programs, write to the Physics Graduate Committee.

503 Digital Computing Methods in Physics (5)

Practical computer programming (FORTRAN, etc.) with special emphasis on problems in physics.

Sp or Su.

505 Mechanics (3-5)

Prereq: degree in area outside physics, and perm. For students with grad rank, especially in multidisciplinary programs, whose preparation does not include equiv of 311.

506 Mechanics (3-5)

Prereq: degree in area outside physics, and perm. For students with grad rank, especially in multidisciplinary programs, whose preparation does not include equiv of 312.

507 Electricity and Magnetism (3-5)

Prereq: degree in area outside physics, and perm. For students with grad rank, especially in multidisciplinary programs, whose preparation does not include equiv of 312.

508 Electricity and Magnetism (3-5)

Prereq: degree in area outside physics, and perm. For students with grad rank, especially in multidisciplinary programs, whose preparation does not include equiv of 428.

511 Thermodynamics (4)

1st and 2nd laws of thermodynamics, phase changes, and entropy. Temperature, thermodynamic variables, equations of state, heat engines. 3 lec, problems.

F; Y

512 Kinetic Theory and Statistical Mechanics (4)

Kinetic theory, transport phenomena, and introduction to classical and quantum statistics. 3 lec, problems.

W; Y

520 Acoustics (3)

Vibration, sound radiation, sound propagation, and practical aspects of sound. (Offered odd years only.) 3 lec.

Sp; A

523 Optics (3-5)

Geometrical and physical optics. Reflection, refraction, lenses, polarization, birefringence, interference, diffraction, coherence, and selected introductory topics in modern optics. 3 lec, problems, 2 lab (optional).

Sp; A

531 Electronics Laboratory (3)

Experiments in electronic measurement techniques from simple a.c. and digital circuits to microprocessors and analyzers. 6 lab.

Staff; F; Y

551 Quantum Physics (4)

Quantum effects in atomic and molecular physics; basic ideas of quantum mechanics; solutions to Schrodinger equation of simple systems. 3 lec, problems.

F; Y

552 Quantum Physics (4)

Quantum effects in atomic physics; identical particles and Pauli principle; application of quantum mechanics to interpretation of atomic spectra and structure. 3 lec, problems.

W; Y

553 Nuclear and Particle Physics (3)

Descriptive treatment of nuclear phenomena. Elementary theory of nucleon-nucleon interaction. Systematics of nuclear structure (shell model and collective model). Properties and interactions of fundamental particles. Devices and techniques of nuclear and high energy physics. 3 lec, problems.

Sp; Y

556 Physical Science for Secondary School Teachers (1-7)

Prereq: degree or perm. Major physical science concepts found in Intermediate Science Curriculum Study Program.

Su, D

571 Solid State Physics (4)

Fundamental properties of solid state of matter. 3 lec, problems.

Sp; A

575 Advanced Laboratory (1 hr per sect, max 3)

Wide selection of experiments from many areas of physics. Limit of 2 students per section. Student may select up to 3 different sections each qtr.

601 Graduate Laboratory (1-4)

Selected experiments from all areas of physics requiring accurate measurements with refined apparatus.

W; D

602 Graduate Laboratory (1-4)

Continuation of 601. See 601 for description.

Su, D

605 Classical Mechanics (5)

Basic analytical techniques for point mass systems and rigid bodies in traditional and contemporary perspective, mathematical complements. 3 lec, intensive problems.

F; Y

606 Classical Mechanics (5)

Continuation of 605. See 605 for description. 3 lec, intensive problems.

W; Y

607 Electrodynamics (5)

Deductive development from Maxwell's equations, including recent advances; special theory of relativity and applications to charged particle problems; mathematical complements. 3 lec, intensive problems.

F; Y

608 Electrodynamics (5)

Continuation of 607. See 607 for description. 3 lec, intensive problems.

W; Y

609 Electrodynamics (5)

Continuation of 607-608. See 607 for description. 3 lec, intensive problems.

Sp or Su; Y

610 Quantum Mechanics (5)

Brief review of Schrodinger equation; elements of scattering theory, phase shift analysis, and Born approximation; operators, matrices, angular momentum and spin; basic semi-classical, perturbation, and variational techniques; exchange and symmetry effects; atomic spectra and electromagnetic transitions; diverse applications; introduction to second quantization; mathematical complements. 3 lec, intensive problems.

F; Y

611 Quantum Mechanics (5)

Continuation of 610. See 610 for description. 3 lec, intensive problems.

W; Y

612 Quantum Mechanics (5)

Continuation of 610-611. See 610 for description. 3 lec, intensive problems.

Sp; Y

613 Mathematical Physics Practicum (2)

Selected mathematical techniques important to physicists.

615 Mathematical Methods in Physics (5)

Mathematics to complement basic grad physics courses. Curvilinear coordinates, special functions, Fourier analysis, and others. 3 lec, intensive problems.

F; Y

616 Mathematical Methods in Physics (5)

Continuation of 615. See 615 for description. 3 lec, intensive problems.

W; Y

617 Methods of Theoretical Physics (3-5)

Selected advanced mathematical methods employed in theoretical physics. Group theory, linear operators, and partial differential equations treated at regular intervals.

619 Advanced Acoustics (2)

Interaction of ultrasonic waves with gaseous, liquid, and solid states of matter. 2 lec.

620 Advanced Acoustics (2)

Continuation of 619. See 619 for description. 2 lec.

623 Thermophysics (6)

Thermodynamical principles, potentials, and equilibrium criteria; ensembles, fluctuations, and partition functions; statistics of Bose-Einstein, Fermi-Dirac, and Boltzmann; applications to ideal systems. 4 lec, intensive problems.

Sp or Su, Y

650 General Relativity (5)

Prereq: 429, grad rank or perm. Introduction to general relativity, Einstein's field equations, gravitational waves, singular solutions, elements of relativistic cosmology. 4 lec.

Staff

695 Thesis (as recommended by dept)**696 Special Study (1-15)**

Supervised individual study at beginning grad level. Can be used for writing M.S. or M.A. paper.

720 Theoretical Acoustics (2)

Acoustic fields, scattering of acoustic waves, and acoustic wave propagation. 2 lec.

726 Introduction to Nuclear Physics (4)

Experimental and basic theoretical aspects of interactions of particles in matter. Elements of nuclear structure and nuclear reactions. 3 lec, problems.
Y.

727 Introduction to Nuclear Physics (4)

Continuation of 726. See 726 for description. 3 lec, problems.
Y.

731 Introduction to the Solid State (4)

Structure and thermal, electronic, and magnetic properties of solids. 3 lec, problems.
Y.

732 Introduction to the Solid State (4)

Continuation of 731. See 731 for description. 3 lec, problems.
Y.

733 Introduction to the Solid State (4)

Continuation of 731-732. See 731 for description. 3 lec, problems.

735 Quantum Theory (4)

Relativistic quantum mechanics; Dirac and Klein-Gordon equations; Hilbert spaces; propagator and diagram techniques; many-body theory; applications. 3 lec, problems.
F; Y.

736 Quantum Theory (4)

Continuation of 735. See 735 for description. 3 lec, problems.
W; Y.

737 Second Quantization (3)

Basic techniques; emission and absorption of electromagnetic radiation; applications to many-body systems of diverse types. 3 lec.
Sp; D.

741 Statistical Mechanics and Thermodynamics (2-4)

Selected topics.

742 Statistical Mechanics and Thermodynamics (2-4)

Continuation of 741. See 741 for description.

744 Solid-State Theory (3)

Applications of quantum theory to perfect crystals and to imperfections in solids. 3 lec.

750 Introduction to Particle Physics (3)

Basic properties of subnuclear particles; relativistic kinematics, techniques of high energy physics; symmetry principles. 3 lec.

751 Particle Theory (3)

Theoretical formulations and current questions regarding nature of, and interactions between, subnuclear particles. 3 lec.

752 Particle Theory (3)

Continuation of 751. See 751 for description. 3 lec.

855 Nuclear Theory (3)

Theory of nuclear reactions and nuclear models. 3 lec.

856 Nuclear Theory (3)

Continuation of 855. See 855 for description. 3 lec.

871 Advanced Quantum Theory (3)

Selected topics. 3 lec.

875 Advanced Nuclear Theory (3)

Selected topics of current interest. 3 lec.

877 Advanced Solid-State Theory (3)

Selected topics. 3 lec.

891 Colloquium (1)

Selected topics of current interest. *Required of all grad students.*

893 Seminar (1-4)

Thorough study of important area. Experimental techniques, classic experiments, and statistical methods discussed.

894 Special Topics (1-4)

Lectures on special topics such as optical physics, continuum mechanics, advanced quantum theory, or other subjects not specified under regular course headings.

895 Doctoral Research and Dissertation (as recommended by dept)**896 Special Study (1-15)**

Supervised individual study in preparation for research.

897 Research Seminar (1-4)

Intensive study of selected subjects by special groups. (A) nuclear; (B) high energy; (C) acoustics; (D) solid state; (E) theoretical.

899 Problems in College Teaching (1-3)

For all grad students assigned to teaching duties.

POLITICAL SCIENCE

The master of arts degree program covers all the major areas of political science: American politics, public administration, theory and methodology, international relations, comparative politics, and area studies. The department works closely with the University's Center for International Studies which administers programs in Latin American, Southeast Asian, and African Studies. It also cooperates with the law enforcement and master of social science programs.

A certificate in public administration is available to those who specialize in that field. Public administration specialists are also encouraged to apply for internships with local and state government agencies.

To begin graduate work in political science, a student should have the equivalent of 27 hours of undergraduate work in political science. Applications will also be considered from students with academic backgrounds in closely related areas. Submission of Graduate Record Examination scores is recommended for applicants for financial aid. A number of departmental associateships are available to qualified applicants. Holders of these associateships are normally expected to assist in the instruction of the introductory course or in research. Qualified applicants may apply for admission for any quarter. Applicants who seek financial aid for the following academic year should submit application materials by March 1.

The department offers both a thesis and nonthesis option for the M.A. degree. General requirements are: a minimum of 45 quarter hours of graduate work, of which ten may be credited for the thesis if that option is chosen, and an oral examination in the area of the student's special interest. These areas of concentration are (1) American government, (2) public administration, (3) comparative politics, (4) international relations, (5) political theory and methodology.

501 American Constitutional Law (5)

Principles underlying American constitutional government. Consideration of leading cases with reference to interpretation of U.S. Constitution.

Gusteson.

502 American Constitutional Law (5)

Continuation of 501. See 501 for description.

Gusteson.

503 Judicial Process (5)

Inquiry into formal and informal functions of prosecuting attorneys, defense attorneys, juries, judges, and quasi-judicial bodies; analysis and evaluation of major problems confronting each. Ohio judicial system given special emphasis.

Henderson.

504 Civil Liberties (5)

Examination of selected civil liberties issues such as freedom of expression, human and political equality, rights of criminally accused, and rights of indigent.

Henderson.

505 American Political Parties (5)

Origin, growth, organization, and methods of parties. Suffrage, nominations, and elections. Role of parties in democracy.

Gusteson.

506 Elections and Campaigns (5)

Examines nature of voter and rationality of voter decisions; impact of campaigns and their influence on election outcomes; techniques used in political campaigns; and role of elections in American society.

Richard.

508 Urban Public Administration (5)

Examines administration of urban programs and encounters between urban administration and program clientele. Focuses on literature of agency-client relationships, professionalism, public personnel administration, and public administration.

Staff.

509 Law Enforcement (5)

Role, function, and problems of American judicial, prosecutory, policing, and correctional systems in political process. Relationship of law and social organization.

510 Public Policy Analysis (5)

Examines stages of policy process, including policy formulation, implementation, and evaluation. Also discusses development and methods of policy analysis.

Staff.

511 Public Administration (5)

Development of administrative organizations, current ideas in organizational theory, nature of federal bureaucracy, fiscal management, and control of administrative action.

512 Public Personnel Administration (5)

Analysis of philosophy, problems, and procedures of public personnel management. Recruitment, training and promotion policies, position classification, and employer-employee relations.

Collins.

513 Administrative Law

Organization, function and procedures of selected national regulatory agencies. Principles affecting administrative discretion, administrative power over private rights, enforcement, and judicial control of administrative decisions.

Collins.

514 Organizational Theory and Behavior (5)

Examination of central role of organizations in public life, presenting major theories of organizations, organizational behavior, and individual's role in organization. Explanatory theories drawn from political philosophy, political psychology and sociology, as well as from public administration.

Weinberg.

515 The American Presidency (5)

Analysis of office of national chief executive and its place in American political system: constitutional status and powers, functional development, and interrelationship of person and office.

Gusterson.

516 Political Leadership (5)

Examination of central role of leadership in political life, presenting major theories of leadership. Explanatory models drawn from perspectives of political psychology and political sociology, as well as from statecraft and political science.

Gagliano.

517 Legislative Processes (5)

Environments in which legislature functions, various participants in legislative processes, formal and informal legislative structure, and procedures and politics of legislative reform. Classroom simulations provide opportunities for student role playing. Emphasis on American national and state legislatures.

Richard.

518 Interest Groups in American Politics (5)

Organization and tactics of pressure groups and their impact on policymaking groups.

Tucker.

519 Public Opinion in American Politics (5)

Explores questions of how political attitudes are formed, maintained, and changed; how political attitudes and public opinion are distributed and their role in formation of public policy; and how public opinion is measured.

Richard.

520 Women and Politics (5)

Prereq: grad. Focuses on political and legal position of women in U.S. Covers women's legal status, feminist movement, current issues, and public policy responses concerning women's position such as Equal Rights Amendment, marriage and divorce laws, affirmative action, and abortion.

Richard.

522 Financial Issues in Government (5)

Examines topics of governmental accounting and financial reporting, sources of revenues, municipal debt, municipal securities market, and fiscal stress. Emphasis on state and local finance but reference made to financial problems of federal government as well.

Weinberg.

523 Public Budgeting (5)

Examines budgetary policy and politics at national, state, and local levels of government. Topics include: program and performance budgeting, budget preparation and review, capital budgeting, debt management, and public accounting systems.

Weinberg.

524 Intergovernmental Relations (5)

Examines intergovernmental fiscal patterns between federal-state-local governments and impact of fiscal transfers on local budgeting and finance administration. Also includes analysis of nonfiscal patterns such as federal program requirements, their impact on local administrative processes, and other pressures on local budgeting and finance.

Staff.

527 Formulation of American Foreign Policy (5)

Institutional and administrative as well as political and more informal processes influencing formulation and implementation of U.S. foreign policy decisions. Although focus on executive branch (White House, Department of State, Foreign Service, Department of Defense, AID, CIA) other contributory influences such as Congressional involvement, political parties, public opinion, etc. included.

Molineu.

529 Comparative Public Administration (5)

Examines and compares characteristics of comparative public administrative systems in various national settings.

Williams.

531 Communist Political Systems (5)

Combines examination of approaches to study of Communist political systems in general with analysis of similarities and differences in development, organization, and functioning of various Communist Party states, primarily those of Eastern Europe.

Williams.

532 Government and Politics of the Soviet Union (5)

Institutions, nature, and policies of Soviet system of government: historical background, ideology and organization; dynamics of ideology and power; and nature of totalitarian systems.

Williams.

533 Soviet Foreign Policy (5)

Analysis of foreign policies of U.S.S.R. Historical, ideological, and other influences, relations with bloc countries.

Williams.

534 Government and Politics of Latin America (5)

Political systems of Latin America. Emphasis on power relationships and political obstacles to change in contemporary Latin America.

Walker.

535 Revolution in Latin America (5)

Revolution as theoretical concept and as practical reality in several Latin American countries. Special emphasis on Cuban and Mexican revolutions.

Walker.

536 Politics of Brazil (5)

Emphasis on 20th century politics, particularly relationship between patrimonial society and political institutions. Important power contenders such as military, church, landed aristocracy, industrial elite, bureaucracy, labor, and peasantry examined.

Walker.

538 Government and Politics of Germany (5)

Analysis of political institutions, processes, and forces in contemporary Germany.

Bald.

540 The Politics of Developing Areas (5)

Major theories and problems of political, sociocultural, and economic development in new nations of Asia, Africa, and Latin America, with special emphasis on heritage of colonialism, struggle for independence, and political adjustments to rapid social and technological change.

Staff.

541 Government and Politics of Africa (5)

Development and structure of modern African states with emphasis on political processes in tropical Africa.

Baum.

545 Government and Politics of Japan (5)

Political institutions and processes of Japan with emphasis on developments since 1945.

Elsbree.

546 Government and Politics of China (5)

Prereq: grad. Traditional governments and processes, and major political developments in China with emphasis on recent events.

Elsbree.

547A Government and Politics of Southeast Asia (5)

Traditional governments in Southeast Asia, western colonialism, rise of nationalism, achievement of independence.

van der Veer.

547B Government and Politics of Southeast Asia (5)

Prereq: grad. Deals with political developments in states of Southeast Asia in post-WW II period. Sequence to 547A which is not a prerequisite, however.

552 Advanced International Relations (5)

In-depth analysis of various aspects of international relations including major theoretical approaches.

Molineu, Kim.

555 International Law (5)

International law in interstate relations and in international organization.

Kim.

556 International Organization (5)

Nature, development, structure, and function of international organizations, with emphasis on United Nations.

Kim.

559 Arms Control and Disarmament (5)

Examines military force in nuclear age with special emphasis on strategy of nuclear deterrence; history of disarmament negotiations since WW II; arms control agreements; and case studies in current U.S.-Soviet arms control negotiations.

Bald.

561 Weak States in World Politics (5)

Impact of new states on international relations. Attention given to problems and foreign policies of new states.

Baum, van der Veur.

563 The United States and Africa (5)

Origins and nature of American relations with African states, with emphasis on current American interests and policy.

Baum.

571 Legal Theory and Social Problems (5)

Examination of legal reasoning and normative values of judges, lawyers, legal theorists, and quasi-judicial bodies in shaping legal solutions to contemporary social problems.

Henderson.

574 19th Century Political Thought (5)

Movements in 19th century political thought in Europe; liberalism, socialism, irrationalism among subjects covered.

575 Studies in Political Thought (5)

Selected topics in political theory; e.g., anarchism, socialism, democratic theory, technology and politics, etc. Consult department for information pertaining to current course description and schedule.

Staff.

576A American Political Thought (5)

Considers origin and development of political ideas from colonial period through slave controversy.

Prisley.

576B American Political Thought (5)

Continuation of 576A. 576B begins with Social Darwinism and concludes with contemporary political ideas in America.

Prisley.

579 Latin American Political Thought (5)

Evolution of Latin American political thought from conquest to present. Major emphasis on 20th century movements such as Democratic Left, progressive Catholic Left, and Marxist Revolutionary Left.

Walker.

581 Modern Political Analysis (5)

Problems of knowledge in social sciences, with emphasis on political science. Analysis of recent major theories or approaches in political science.

Dabelko.

582 Quantitative Political Analysis (5)

Prereq: perm. Relevance of scientific research techniques to study of politics.

Dabelko.

585 Personality and the Political Process (5)

Relevance of personality characteristics, psychological mechanisms, and life history factors in explaining political behavior. Topics covered: behaviorism, psychoanalytic theory, authoritarianism, dogmatism, and other personality traits as related to political beliefs and behavior.

Dabelko.

590 Studies in Political Science (1-5)

Intensive study of special topics, including American government, international relations, political theory, and public administration.

Staff.

591 Research in Political Science (1-5, max 10)

Individual supervised research.

Staff.

595 Internship Program (max 15)

Prereq: perm.

Staff.

598 Problems in Political Science (1-5, max 10)

Research or directed reading based on student's special interest.

Staff.

610 Seminar in American National Government (5, max 15)

Selected topics.

611 Seminar in Comparative Politics (5, max 15)

Selected topics.

612 Seminar in International Relations and Organization (5, max 15)

Selected topics and theoretical issues.

613 Seminar in Political Theory (5, max 15)

Selected topics.

614 Seminar in Public Administration (5, max 15)**648 Politics of Southeast Asia (5)**

Analysis of major themes such as boundary problems, corruption, military, regional cooperation.

van der Veur.

695 Thesis (1-10)

Prereq: perm.

Staff.

PSYCHOLOGY

Doctoral programs are offered in clinical, experimental, and industrial psychology. The clinical program is fully approved by the American Psychological Association. All doctoral programs offer the master's degree as a step toward the Ph.D. and require a research thesis for the master's degree. For the Ph.D., all students must satisfactorily complete a comprehensive examination, a scholarly tool, and a research dissertation. A one-year internship at an APA-approved facility is also required for the clinical Ph.D. All doctoral candidates are required to do some teaching, professional, or clinical work under supervision, the specific amount to be determined by past experience and needs, but not less than the equivalent of three academic quarters of work.

For those interested in a master's degree but not in a Ph.D. degree, a specialized master's degree is offered in experimental psychology and in school psychology. It provides specialized training in these specific areas. No master's degree is offered in clinical psychology or industrial psychology for those interested only in a master's degree. Both the experimental and school psychology master's degree programs require a minimum of 60 quarter hours for the degree. The experimental master's degree also requires a research thesis. The school psychology master's degree has a comprehensive examination and either a research thesis or a critical review paper.

Applicants for graduate study are expected to have completed a minimum of 27 quarter hours of undergraduate psychology, including a course in statistics and one in experimental psychology. Applicants must submit scores on the Graduate Record Examination, including the general test and the subject test in psychology; transcripts of all academic work; and three letters of recommendation from psychologists. They also must have a minimum overall undergraduate average of 3.0 (A = 4.0). An applicant for the doctoral program who has a master's degree from another university must have a minimum graduate average of 3.4.

The Department of Psychology strongly encourages students to begin their graduate program in the fall quarter. Application materials must be received by February 1.

520 Elementary Statistics (5)

1st statistics course for grad students who have not had such an undergraduate course. (Does not carry degree credit. Not open to students who have had PSY 121.)

Staff; F, W, Sp, Su; Y; 1982-83.

525 Elementary Experimental Psychology (5)

Prereq: perm. 1st course in designing experiments; for grad students who did not have such an undergraduate course. (Does not

carry degree credit. Not open to students who have had PSY 226.) 2 lec, 4 lab.

Staff; F, W, Sp, Su; Y; 1982-83.

541 Behavioral Measurement (5)

Testing and measurement; basic criteria including objectivity, reliability, validity. Methods of test construction and validation for students who have not had such an undergraduate course. (Does not carry degree credit. Not open to those who have had PSY 241.)

Fealock; F; Y; 1982-83.

559 Field Work in Psychology (1-15)

Prereq: perm. Applied supervised psychological practice in field-work agency approved by dept. (Does not count toward degree credit.) May be repeated. 1-15 lab.

Staff; F, W, Sp, Su; Y; 1982-83.

590 Readings in Psychology (1-5, max 20)

Prereq: perm. To broaden training of master's or doctoral level students in areas in which they need further work which cannot be obtained through specific courses at present.

Staff; F, W, Sp, Su; Y; 1982-83.

618 Systems of Psychology (5)

Prereq: perm. Philosophy of science in psychology; nature of observation, theory construction, and explanation, with historical review of important systematic positions in psychology.

Moates; Sp; A; 1981-82.

621 Intermediate Statistics for Behavioral Sciences (5)

Prereq: perm. Statistical inference and most commonly used tests of hypotheses involving normal curves, *t* test, chi-square, and *F* distributions; introduction to probabilistic classification and Bayesian statistics. 4 lec, 1 lab.

Waters; F; Y; 1982-83.

622 Intermediate Correlation and Regression (4)

Prereq: 621. 2-variable correlation and regression, partial and multiple correlation, nonlinear relationships.

Waters; W; Y; 1982-83.

623 Design and Analysis of Experiments (4)

Prereq: 622 or EDRS 721. Independent groups, repeated measures, and mixed analysis of variance designs. Matching statistical analyses to experimental procedures.

Bellezza; Sp; Y; 1982-83.

626 Advanced Experimental Psychology (3)

Prereq: 621. Experimental design and techniques. Individual experiments.

Staff; Sp; Y; 1982-83.

633 Psychology of Personality (3)

Prereq: perm. Development and organization of personality; evaluation of major theoretical viewpoints; review of research on personality structure, dynamics, and change.

Russell; F, Su, Y; 1982-83.

640 Practicum in Intervention Strategies (4)

Prereq: 743A or with 743A. Supervised experience in selecting and administering tests to children referred for individual study; collecting educational and developmental data and integrating findings in reports and recommendations.

Creer; W; Y; 1982-83.

677 Practice of School Psychology (4)

Prereq: perm. Responsibilities and activities of school psychologist.

Bradshaw; Sp; Y; 1982-83.

678 Supervised Field Experience in School Psychology (1-15)

Prereq: perm. Supervised experience in school psychology in public school setting. Apply before March 1 for following September. (Does not count toward degree credit.)

Bradshaw; F, W, Sp, Y; 1982-83.

695 Thesis (1-10)

Prereq: perm.

Staff; F, W, Sp, Su, Y; 1982-83.

701 Experimental Sensory Psychology (5)

Prereq: 712 or perm. Analysis of classical sensory systems (vision, audition, olfaction, somatic, regulatory, etc.) and their contributions to various behaviors. 4 lec, 1 lab.

Sanberg; W, D; 1982-83.

703 Advanced Learning (5)

Prereq: perm. Lectures and readings covering theoretical works in field of learning.

Lewis; W, D; 1980-81.

704 Cognitive Processes (5)

Prereq: perm. Theory and research in human cognitive processes such as learning, memory, concept formation, problem solving, mental operations, consciousness, motor skills, and language within information-processing point of view.

Schumacher; Arkes; F, Su; Y; 1982-83.

706 Psychology of Communication (4)

Prereq: perm. Application of communication theory, psycholinguistic principles and readability measurement to process of communication, with emphasis on written communication.

Klare; F; Y; 1982-83.

707 Psycholinguistics (4)

Prereq: perm. How people produce, understand, and acquire language within framework of major psychological and linguistic theories of language. Emphasis on user of language rather than on language.

Moates; W; A; 1981-82.

708 Psychology of Judgment and Prediction (2-4)

Prereq: perm. Examines normative and descriptive models of human judgment, with emphasis on clinical judgment and prediction. Bias, diagnosis, selective information usage, and intuition also included.

Arkes; W; Y; 1982-83.

710 Motivation (5)

Prereq: perm. Dynamics of motivation including treatment of traditional theories as well as achievement and cognitive motivational theories.

Arkes; W; Y; 1982-83.

712 Physiological Psychology (5)

Prereq: perm. Biological basis of behaviors, with emphasis on central nervous system. 4 lec, 1 lab.

Sanberg; F; Y; 1982-83.

714 Comparative Psychology (5)

Prereq: perm. Behavior of lower and higher organisms leading up to humans.

Johnson; W; D.

715 Psychology of Human Differences (5)

Prereq: perm. Methodology, basic principles, and general findings in individual differences in intelligence, personality, interests, and perception; group differences by sex, age, race, and socioeconomic class.

Staff; F; D.

727 Psychophysiology and Attention (4)

Prereq: perm. Human psychophysiology. 2 lec, 2 lab.

Kates; F; Y; 1982-83.

735 Experimental Social Psychology (5)

Prereq: perm. Major theoretical and research trends, with emphasis on attitudes, social perception, and small-group behavior.

Lindsold; S; D; 1980-81.

736 Advanced Social Psychology (5)

Prereq: perm. Major research and theoretical trends in social psychology; observational learning and social motivation.

Arbuthnot; S; D; 1977-78.

737A Psychopathology, Clinical (3)

Prereq: perm. Theoretical and empirical literature on definitions and systems of classifying deviant behavior patterns. Coverage of situational reactions, neuroses, character disorders, psychoses, organic brain damage, and mental retardation.

Garske; F; Y; 1982-83.

737C Psychopathology of Childhood (3)

Prereq: perm. Definitions and models of deviant childhood behavior. Comparisons of child and adult patterns of clinical psychopathology. Attention to physical, learned, and social bases of deviant behavior.

Appel; W; Y; 1981-82.

741A-X Assessment I (1-5)

Prereq: perm. Introduction to various intelligence, personality, and behavioral observation tests and techniques. 741A individual intelligence testing; 741B individual intelligence testing: Adult; 741C individual intelligence testing: Child; 741N neuropsychology.

Bradshaw; Drevstedt; Sarver; F, W, Sp, Y; 1982-83.

742A-X Assessment II (1-5)

Prereq: 741, perm. Work with more specialized and advanced tests and observational techniques. 742A individual intelligence testing: Stanford-Binet; 742B personality; 742C behavioral observation; 742D neurological.

Drevstedt; Lynn; Sarver; F, W, Sp, Y; 1982-83.

743A-X Assessment III (1-5)

Prereq: 742, perm. Integrated personality evaluation from clinical testing; 743A exceptional children; 743B objective personality tests; 743C projective personality tests; 743N neurological.

Lynn, Bradshaw, Sarver; W, Sp; Y; 1982-83.

745A-X Assessment Practicum (1-8)

Prereq: perm. Introduction to and application of basic assessment and clinical skills. May be repeated. 745A general clinical skills; 745B intelligence testing; 745C personality testing; 745D behavioral observation; 745E neurological assessment; 745F exceptional children.

Staff; F, W, Sp; Y; 1982-83.

759 Fieldwork in Psychology (1-15)

Prereq: perm. Applied supervised psychological practice in field-work agency approved by dept. May be repeated. 1-15 lab.

Staff; F, W, Sp, Su; Y; 1982-83.

761 Seminar in Industrial Psychology I (4)

Prereq: perm. Selected topics. Student may enroll in either 761 or 762 or in both courses in either order.

Waters; D; 1980-81.

762 Seminar in Industrial Psychology II (4)

Prereq: perm. Selected topics. Student may enroll in either 761 or 762 or in both courses in either order.

Waters; D; 1979-80.

763 Human Factors (1-5)

Prereq: perm. Psychological factors in human information-processing, decision-making, signal detection, and man-machine systems.

Waters; D.

764A-G, J-K Advanced Industrial Psychology (3 each)

Prereq: perm. Student may take up to 6 of the following: A. selection and evaluation; B. training; C. history of industrial psychology; D. job satisfaction; E. leadership and supervision; F. motivation and production; G. social psychology of organizations; J. small-group dynamics; K. cross-cultural/comparative organizational behavior.

Waters; D.

773 Developmental Psychology (5)

Prereq: perm. Principles and research covering development of human abilities and behavior with emphasis on lifespan approach. Topics include developmental research methodology; variables influencing development; basic processes in development; and physical, motor, perceptual, cognitive, linguistic, motivational, emotional, social, and personality development.

Schumacher; F; Y; 1982-83.

775 Psychology of Exceptional Individuals (5)

Prereq: perm. Characteristics and problems of exceptional individuals; mentally retarded, mentally superior, sensory handicapped, emotionally disturbed, and culturally disadvantaged.

Bradshaw; F; Y; 1982-83.

776 Programmed and Computer-Assisted Instruction (4)

Prereq: perm. Use of programs and machines; principles and procedures in preparing programs; writing of objectives and frames for trial program.

Klare; D.

790 Readings in Psychology (1-5, max 20)

Prereq: perm. To broaden training of master's or doctoral level students in areas in which they need further work which cannot be obtained through specific courses at present.

Staff; F, W, Sp, Su; Y; 1982-83.

791 Research (1-5)

Prereq: perm. (May be repeated.)

Staff; F, W, Sp, Su; Y; 1982-83.

793 Seminar in Teaching of Psychology (2)

Prereq: perm.

Lindskold; S; Y; 1982-83.

825 Advanced Regression (4)

Prereq: 623. Multivariate techniques in analysis of behavioral data.

Staff; D.

826 Advanced Testing Principles (4)

Prereq: 623. Test theory and statistical considerations in construction, use, and interpretation of psychological measures.

Drevenstedt; D; 1981-82.

827 Advanced Quantitative Methods (4)

Prereq: perm. Advanced instruction in selected general techniques for identifying and quantifying behavior characteristics.

Techniques of multivariate analysis, Bayesian analyses, analysis of variance, nonparametric analyses, and multidimensional scaling.

Bellezza; D; 1982-83.

828 Psychological Data Analysis by Computer (4)

Prereq: 623. Survey of multivariate statistics including multiple regression, canonical correlation, factor analysis, discriminant analysis, and multivariate analyses of variance.

Bellezza; W; Y; 1982-83.

833 Advanced Theories of Personality (5)

Prereq: 633. Analysis in depth of selected modern theories and related research, taken from ego psychology, cognitive-perceptual, dimensional, developmental, or social viewpoints.

Garske, Russell; D.

853A-X Treatment II (1-5)

Prereq: 753, perm. Theory and practice in various types of psychotherapy. 853A individual psychotherapy; 853B behavior modification; 853C community psychology; 853D counseling psychology; 853E child therapy; 853F family therapy; 853G group therapy; 853H gestalt therapy.

Staff; F, W, Sp; Y; 1982-83.

854A-X Treatment III (1-5)

Prereq: 853, perm. Continuation of 853. 854A individual psychotherapy; 854B behavior modification; 854C community psychology; 854D counseling psychology; 854E child therapy; 854F family therapy; 854G group therapy; 854H gestalt therapy.

Staff; F, W, Sp; Y; 1982-83.

855A-X Practicum in Treatment (1-8)

Prereq: 853, or with 853, or 854A, perm. Supervised experience in counseling and psychotherapy. May be repeated. 855A individual psychotherapy; 855B behavioral modification; 855C community psychology; 855D counseling psychology; 855E child therapy; 855F family therapy; 855G group therapy; 855H gestalt therapy.

Staff; F, W, Sp; Y; 1982-83.

891 Research in Psychology (1-6)

Prereq: perm.

Staff; F, W, Sp, Su; Y; 1982-83.

894A-Z Advanced Seminar in Psychology (1-5, max 18)

Prereq: perm.

Staff; F, W, Sp, Su; Y; 1982-83.

895 Dissertation (1-15)

Prereq: perm.

Staff; F, W, Sp, Su; Y; 1982-83.

RADIO-TELEVISION

(See Telecommunications)

RUSSIAN

(See Foreign Languages and Literatures)

SOCIAL SCIENCES

The master of social sciences degree is designed to meet the needs of graduate students whose professional employment makes it desirable that they study two or more subjects within the social sciences while earning the master's degree. Though it is anticipated that most such students will be public school teachers, candidates from other occupations may apply for admission to the program if the study would be to their professional advantage. The degree is appropriate for students intending to conclude their graduate education at the master's level of study.

The program is directed by a steering committee appointed jointly by the dean of the College of Arts and Sciences and the associate provost for graduate studies and research. The committee will supervise the policies which guide the program and will coordinate such matters as admission and the assigning of advisors with the social science departments. Each student's work is directly supervised by an advisory committee composed of two or three faculty members, one for each field of study forming a major or minor.

DEGREE REQUIREMENTS

A candidate for the master of social sciences degree must complete a minimum of 45 graduate credit hours and ten graduate courses in two or more of the social science disciplines.

Major and minor fields and auxiliary areas are chosen from the social sciences of history, political science, economics, sociology, anthropology, and geography. Other subject fields such as psychology and social work which may be relevant to a candidate's interest may be approved as minor or auxiliary fields.

Courses and credit will be distributed as follows:

1. A major of from five to seven courses and a minimum of 20 graduate credit hours.
2. A single minor; or a minor and an auxiliary area; or two auxiliary areas. A minor consists of three to five courses for a minimum of 12 graduate credit hours. An auxiliary field consists of two courses for a minimum of eight graduate credit hours.
3. Optional electives. One or two courses (for a maximum of 10 graduate credit hours) other than social science fields so long as courses chosen are relevant to the candidate's professional interest and the student is academically qualified to undertake the studies selected.

Graduate Survey Requirement. Each candidate will complete in his or her major discipline one or two graduate survey courses which are especially designed to present a comprehensive survey of recent scholarship in a special field of the subject.

Master's Essay Option. As a part of the work in the major field each student may choose to write a master's research essay under the direction of a member of the graduate faculty in the major department. The topic and scope of the essay is subject to the approval of the person chairing the student's committee. A student who selects this option will register for four or five graduate credit hours in the master's thesis course of his or her major department. The master's essay will count as one course toward the major requirement and also as one of the minimum of ten courses required of each candidate.

Terminal Examination. Upon completion of studies each student must pass an oral examination designed and conducted by the student's committee. In composing this examination the committee will be guided by the program of courses and research pursued by each candidate so that the examination will be reasonable in scope.

ADMISSION REQUIREMENTS

An applicant for admission to this program must have a bachelor's degree and at least one year of employment experience which is relevant to one or more social science disciplines. Applicants should have an undergraduate grade-point average of 2.75 for unconditional admission. Prospective students with an undergraduate g.p.a. below 2.75 are encouraged to apply, but they may be admitted conditionally or they may be denied admission.

A student with between 24 and 30 quarter undergraduate credit hours or 16 to 20 semester undergraduate credit hours in a field chosen as a major may be required to undertake a minimum of seven courses and 28 quarter graduate credit hours in his or her major.

A student with fewer than 24 quarter undergraduate credit hours or 16 semester undergraduate credit hours in a field chosen as a major will be required to register as a special student and take whatever undergraduate courses may be required by the major department to qualify that person to begin graduate study in the discipline under this program.

No more than 12 graduate credit hours or a maximum of three graduate courses passed with a grade of B or better will be accepted for this program from other colleges or universities. Credit earned in other Ohio University programs which in the judgment of the coordinating committee is appropriate for this program may be applied toward completion of the degree.

SOCIOLOGY

An M.A. program in sociology offers preparation for teaching, agency service, research, and advanced graduate training.

Although this department does not adhere rigidly to undergraduate prerequisites, a prospective student should have completed a minimum of 20 hours in sociology including a course in statistics. The student should have an overall average of 3.0 (on a

4.0 = A scale), and should have at least a 3.0 average in undergraduate courses in sociology. The prospective student is asked to make the usual application to the Office of Graduate Student Services. An applicant should arrange for letters of recommendation from three persons qualified to evaluate capacity for graduate study in sociology.

The master of arts program in the department maximizes flexibility in meeting student needs and interests congruent with the study of sociology at the graduate level. Particular strengths within the department are criminology, the study of deviance, gerontology, Appalachian studies, theory, and Latin American studies. Upon request, a listing of faculty and their interests will be provided by the department. Students are expected to demonstrate competence in graduate-level theory and research methodology either through coursework or through special preparation. In addition to satisfying the general requirements of the department and of the Office of Graduate Student Services, the student will design a thesis or nonthesis program in consultation with a faculty advising committee.

The department has an information sheet that details the organization of the M.A. program, and is available upon request. Briefly, each student admitted to M.A. study selects no later than the end of the second quarter of residence three faculty members to serve on his or her committee. Decisions concerning the student's preparation (i.e., course choice, scheduling, and independent study) are made by the committee. Graduate evaluation by thesis, comprehensive examination, or other means is determined by the committee.

The master's degree in sociology may include supplementary work in related disciplines, e.g., political science, philosophy, psychology, economics, history, literature, mass communication, area studies, mathematics, black studies, geography, computer science, linguistics, and anthropology.

A limited number of teaching and research associateships are available. More information may be obtained by writing to the Chairperson, Graduate Committee, Department of Sociology.

A minimum of 50 quarter hours of graduate work is required for the degree. The student is advised to allow for four to six quarters of study. Applications for admission will be accepted until one month (three months in the case of applications from abroad) prior to the beginning of any quarter. Applications for financial aid ordinarily must be completed by March 15.

503 Development of Sociological Thought (5)

Prereq: perm. Major sociological concerns and concepts in their social-historical setting. Emphasis on 18th and 19th centuries.

Staff, D.

504 Modern Sociological Theory (5)

Major sociological conceptual frameworks in 20th century.

Sutherland; F; Y.

505 Readings in Sociology (1-5, max 15)

Independent directed readings designed to expand student's understanding in selected area of interest. Students may not preregister. Registration only by perm of instructor.

Staff, F, W, Sp, Su; Y.

508 Latin American Society (5)

Prereq: perm. Intensive study of Latin American society from a sociological perspective. Emphasis on contemporary Latin American values, population problems, man-land relations, levels and standard of living, social institutions, urbanization, and social change.

Ergood, Wagner; Y.

512 Public Opinion Processes (5)

Attitudes and opinions in relation to formation of public opinion; political socialization and participation; social status, reference groups, decision-making; role of mass media.

Harlan, Sp, D

513 Mass Communication (5)

Personal and social functions of content in newspapers, radio, television, and films. Types of audiences and communication effects. Organization and control of mass media and problems in evaluation.

Harlan, Sp, Y

514 Contemporary Social Movements (5)

Organized movements resulting in major social changes; revolutionary, nationalistic, reform, religious. Agitation, leadership, ideology. Case studies of typical movements.

Harlan, F, Y

516 Society and the Individual (5)

Exploration of compatibilities and contradictions in psychological systems, culture, and social structure.

Shelly, Krebs; D.

519 Small Groups (5)

Small group as unit of social systems; communication patterns, role definition, leadership, cohesion, etc.; review of current literature.

Shelly; D.

522 The American Family System (5)

Evolution of American family from colonial to present time. Analysis of structural and functional trends in light of theory and research.

Staff; D.

524 Urban Sociology (5)

Historical development and recent emergence of city as dominant feature of modern social life. Demographic and ecological patterns and social organization of urban region.

Wagner; Y.

525 Rural Sociology (5)

Examination of structural characteristics of agricultural sector of American society. Historical developments and current trends in demography as they relate to industrialization of agriculture, and examination of responses to these trends.

Krebs; W; Y.

526 Industrial Sociology (5)

Various techniques used by management in U.S. to control employees, employee resistance and alienation, and proposals for changing present work arrangements. Also examination of work relations and organization in Scandinavia, W. Germany, Yugoslavia, and Japan.

Sheak; D.

528 Sociology of Religion (5)

Prereq: perm. Interrelationship between religious institutions and social structure from comparative perspective but with particular reference to American society.

Ergood, Kuhre; D.

530 Sociology of Organization (5)

Organization and structure of social groups. Basic cultural patterns of economic, kinship, and other institutions. Integration and disintegration of social groups and institutions.

Gursslin; D.

531 Social Stratification (5)

Social and economic classes, castes, and other social strata; their origin, changes, and correlates in other spheres of society.

Gursslin, Staff; A.

532 Political Sociology (5)

Analysis of social, economic, and political sources of corporate domination of state, opposition to such domination, and strategies for reducing it.

Krebs, Sheak; D.

533 Sociology of Occupations and Professions (5)

Prereq: perm. Professionalism as characteristic of modern economic and industrial complexes; popular conception and modern theory; social and technological preconditions; occupation-profession continuum; components, barriers, and strategy; mock-professionalism; motivation and satisfaction; controls; professionalism in particular professions.

Sutherland; D.

534 Sociology of Aging (5)

Prereq: grad rank. General introduction to social gerontology with emphasis upon normal aspects of aging. Major emphasis upon sociological dimensions of aging in context of such areas as socio-demographics of aging populations, values, roles, norms, self-concept, age stratification, aging patterns of minority groups, and application of current sociological theories of aging. Includes brief examination of social policy from sociological point of view.

Sutherland; F or W; Y.

550 Social Statistics (5)

Prereq: perm. Principles and procedures in treatment and presentation of quantitative social data.

Staff; D.

553 Research Problems in Sociology (1-5, max 15)

Prereq: 550 and written perm. Students may not register. Registration only by perm of instructor. Individual research problem areas in which student has demonstrated ability and interest.

Staff; F, W, Sp, Su; Y.

564 Social Control (5)

Nature of institutional control and sociocultural constraint as they affect human behavior. Theories and research.

Staff; D.

565 Social Change (5)

Dynamics and processes by which social change takes place; major theories of change; industrialization and modernization; planned change; social impact of change.

Harlan; W, Su; Y.

566 Penology (5)

Prereq: perm. History, practices, and purposes of punishment using organizational, criminological, and sociological perspectives. Effectiveness of rehabilitation programs explored as are race relations and politicization of inmates. Alternatives to incarceration examined.

Staff; D.

600 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

601 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

602 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

603 Seminar in Social Disorganization (4-6)

Prereq: perm. Critical examination of topics in area of social disorganization.

Shamblin; D.

604 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

605 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

606 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

607 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

608 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

609 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

610 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

611 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

612 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

613 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

614 Graduate Seminar (4-6)

Prereq: perm. Critical examination of selected topic.

Staff; D.

654 Social Research Methods (5)

Analysis of process of sociological research, in terms of problem definition, research, design, data sources, and methods of data analysis.

Harlan, Krebs, Shelly; W; Y.

690 Independent Study (1-5, max 10)

Prereq: written perm of departmental grad chairman and 40 grad hrs in sociology. For grad students in good standing who wish to undertake independent study toward M.A. degree under guidance of faculty member.

Staff; F, W, Sp, Su.

695 Thesis (1-12, max 12)

Staff; F, W, Sp, Su; Y.

SOUTHEAST ASIAN STUDIES

(See International Affairs)

SPANISH

(See Foreign Languages and Literatures)

SPEECH

(See Hearing and Speech Sciences or Interpersonal Communication)

SWAHILI

(See Foreign Languages and Literatures)

TELECOMMUNICATIONS

The School of Telecommunications offers programs of study leading to the master of arts degree in telecommunications and the doctor of philosophy degree in mass communication. The doctoral degree is offered in conjunction with the School of Journalism (See Mass Communication).

Individual programs are designed around sequences of graduate courses offered in the areas of media management and economics, mass media research, history, criticism, regulation, and theory and social effects of the media.

ADMISSION

Admission to graduate study in telecommunications requires a baccalaureate degree for the master's program and a completed master's degree for the Ph.D. degree program. Students should have maintained a 3.0 undergraduate grade-point average on a 4.0 scale although other factors — experience or test results, for example — may qualify students with lower grade-point averages for admission. Doctoral applicants are expected to present academic credentials of a higher caliber. All applicants are required to submit letters of recommendation, scores of the Graduate Record Examination and/or the Miller Analogies Test, and appropriate college transcripts. The prospective student should present previous degree work which includes a reasonable background in radio-television and closely allied areas of communication. Because academic ability, recommendations, and other factors weigh heavily in the admission process, some students may enter graduate study without such a background. On advice from the graduate committee, they will be required to make up this deficiency by enrolling in appropriate undergraduate courses or completing a directed readings program.

REQUIREMENTS

The typical master's program consists of a nonthesis sequence of 52 quarter hours, including a minimum of 20 hours in the major field of study and at least 12 hours in a supplementary area. A thesis option exists, with up to five hours of credit for the thesis given in a program of 45 quarter hours of credit. Supplementary areas may be selected from within or outside the College of Communication.

Thesis and nonthesis students are required to take four courses: Introduction to Graduate Study (1 credit), Research Methods in Mass Communication (4 credits), Social Impact of Mass Communication (4 credits), and Issues in Telecommunications (4 credits). The school requires a minimum grade-point average of 3.0. In addition, those who earn a grade below a B in more than two courses are not permitted to continue in the program except in unusual circumstances.

Programs of study are prepared individually for each student and are designed to help the student reach personal and professional goals by optimum use of the school's resources. The master's program prepares students for careers in telecommunications.

Ph.D. requirements are under Mass Communication.

DEADLINES

To permit an adequate review of credentials, applicants for the fall quarter must submit all materials no later than May 1. However, if consideration is requested for financial aid through the school, applications must be complete by March 15. Students in the master's program may only begin the program in the fall quarter. Doctoral applications are accepted for any quarter although there are advantages in starting a program during fall quarter.

FACILITIES

Laboratory facilities are provided by a cable TV production unit, stations WOUB AM-FM-TV, and ongoing contract studies through the school's Broadcast Research Center.

501 Introduction to Graduate Study (1)

Analysis of scholarship and research as foundation for grad study.
Clift; F; Y; 1982.

513 Advanced Audio Production (4)

Prereq: perm. Special problems in audio production, including documentary, live music, and dramatic presentations.
McDaniel, Mould; F; Y; 1982.

518 Advanced Video Production-Direction (4)

Prereq: perm. Individual and group projects in production of television program material.
Staff; F, W; Y; 1982.

519 Advanced Video Production-Direction (4)

Prereq: 518. Continuation of 518. See 518 for description.
Staff; D; 1983.

521 Nonbroadcast Video Systems (4)

Exploration of various applications of small video systems in business, health and medicine, and education.
Berman, Korn; F, Sp; 1983.

540 Public Telecommunications (4)

Historical development, current status, and challenges to public telecommunications.
Clift; Sp; 1983.

541 Instructional Telecommunications (4)

Utilization of telecommunications in instruction: instructional television, commercial TV for instruction, and critical viewing skills.
Clift, Sp; 1982.

552 Electronic Newsgathering (3)

Prereq: perm. Principles and practices of electronic newsgathering and editing.
Moore; Y; 1983.

563 New Technology (4)

Investigation and description of new as well as traditional technologies found in communications industries. Viewings include videotapes of typical system installations; some field trips.
Berman; Sp; Y; 1983.

584 Television Criticism (4)

Survey of contemporary methods of critical analysis as applied to television. Screenings include television programs of past and present, avant-garde, and mainstream.
Himmelsstein; W; Y; 1983.

602 Research Methods in Mass Communication (4)

Statistics, problems, methods, and techniques of telecommunications research.
Sandell; F; Y; 1982.

631 Dramatic and Documentary Writing (4)

Writing and critique of form, structure, and presentation of both dramatic and nondramatic programs and series.
Miller, F, Sp, Y, 1983

632 Advanced Dramatic and Documentary Writing (4)

Prereq: perm. Advanced writing course in which experienced student creates substantive scripts in documentary and dramatic areas.
Miller, W, Sp, Y, 1983

669 Issues in Telecommunications (4)

Overview of broad range of issues in contemporary telecommunications; emphasizes library research and critical essay writing.

Himmelstein; Y; 1982.

694 Independent Study (1-12)

Prereq: perm. Individual research on special problems. Projects must be approved prior to registration.

Staff; F, W, Sp, Su; Y; 1982.

695 Thesis (1-8)

Staff; F, W, Sp, Su; Y; 1982.

703 Statistical Analysis in Mass Communication Research (4)

Prereq: 602 or perm. Statistical techniques as applied to problems in mass communication.

Staff; W; Y; 1982.

705 Research Internship (1-9)

Prereq: acceptance by competition only. Opportunity for students to implement and complete major research study under supervision.

Staff; F, W, Sp, Su; Y; 1982.

750 Economics of Telecommunications (4)

Economic structure of broadcast and cable industries, their relationships with other industries, fiscal policies and practices, sources and control of revenue, profit and expenses. Case studies in economic problems and practices.

Webster; W; Y; 1983.

751 Telecommunications Management (4)

Consideration and examination of theory and practice in telecommunications management, organization, personnel management and motivation; examination of role of manager in relationship to various telecommunications operations.

Savage; Sp; Y; 1983.

753 Telecommunications Law and Regulations (4)

Socio-political control of telecommunications; effect of laws, regulations, and public pressures upon policy.

Clift; W; Y; 1981.

755 Broadcast and Cable Programming (4)

Programming concepts, resources, costs, selection, and scheduling.

Staff; Sp; Y; 1983.

757 Broadcast and Cable Sales Management (4)

Problems and practices of broadcast and cable sales and sales management, policy formation, including projects devoted to commercial inventory and rate structure.

Savage; D; 1981.

759 Audience Research (4)

Prereq: grad rank. Various methods, techniques, and applications of audience study in broadcasting and cable; includes study of current rating services.

Webster; Sp; Y; 1983.

767 Comparative Systems of Telecommunications (4)

Telecommunications systems of selected countries studied in terms of relevant political, social, economic, and cultural factors.

McDaniel; W; Y; 1983.

769 International Telecommunications (4)

Development, impact, and control of international telecommunications for propaganda, commercial, and social purposes.

McDaniel; Sp; Y; 1982.

771 Social Impact of Mass Communication (4)

Group and individual investigation into research methodology, and literature on effects of mass media upon society, with particular reference to telecommunications. 4 lec.

Webster; F; Y; 1982.

779 History of Broadcasting (4)

Origin of U.S. system of radio and television communication and its development to present.

Berman; F; Y; 1981.

786 Colloquium (1-5)

Study and analysis of current issues and problems in telecommunications.

Staff; D; 1983.

804 Seminar in Mass Communication Research (4)

Prereq: 703. Intensive study of research methodologies in mass communication scholarship; individual projects.

Staff; D; 1981.

842 Seminar in Educational Telecommunications (4)

Intensive examination and evaluation of telecommunications utilization in educational process.

Staff; D; 1972.

843 Seminar in Pedagogy (4)

Problems, methods, and techniques of teaching college-level telecommunications.

Rightmire, Berman; Sp; Y; 1982.

865 Seminar in International Telecommunications (4)

Problems in socio-political control of telecommunications related to developing systems of other nations and international implications of technological development of telecommunications.

McDaniel; D; 1975.

884 Seminar in Criticism (4)

Intensive examination of video as esthetic and cultural form. Analysis and practice of video criticism.

Miller; Sp; Y; 1983.

894 Independent Study (1-12)

Prereq: perm. Individual research on special problems. Projects must be approved prior to registration.

Staff; F, W, Sp, Su; Y; 1983.

895 Dissertation (1-12)

Staff; F, W, Sp, Su; Y.

THEATER

The School of Theater offers programs leading to the master of fine arts and master of arts degrees. An applicant for admission must have earned a baccalaureate degree from an accredited college or university and be able to demonstrate motivation and talent for the program of his or her choice. In addition, the candidate should present a background of training which correlates with the student's professional goals. For unconditional admission, the student must have a satisfactory academic record, with strong indications of success in his or her chosen area, and sufficient preparation to qualify for graduate courses to be included in the program. Any deficiencies must be made up by taking appropriate undergraduate courses without graduate credit, or graduate courses in addition to normal requirements.

Applicants for entrance into one of the professional M.F.A. programs must demonstrate qualification by audition, submission of portfolio, interview, or other appropriate means before final approval is granted (see below). This requirement is in addition to the basic admission standards for entrance into the graduate program of the School of Theater.

It is expected that each candidate will have a firm grounding in theater history and dramatic literature as well as demonstrable proficiency in fundamental production techniques, or that coverage of these areas will be included in his or her graduate program.

Throughout the program the student will be closely observed and counseled by the faculty and his or her progress will be reviewed at periodic intervals. At the end of any quarter, he or she may be recommended for transfer to another sequence or degree within the school, required to modify his or her program, or denied further enrollment as a degree candidate in the School of Theater.

Students applying for admission to the acting and directing programs must begin in the fall quarter. Students applying for admission to the playwriting and production design and technology programs are encouraged to begin the program in the fall quarter. Application materials for these programs must be received by April 1. An M.A. degree candidate may apply for admission for any quarter. Applicants seeking financial aid for the following academic year must submit application materials by March 1.

For information concerning financial aid, see the Financial Aids section of this catalog.

Graduate candidates are required to participate each quarter in the production activities of the school in supplementation and extension of their academic work.

The production program of the school is conducted in two adjoining buildings. The first is Kantner Hall, housing a comfortable and well-equipped proscenium theater, a small studio-classroom theater, scenery and costume laboratories, and related facilities. A second theater, incorporating a thrust stage and capable of modification for use in various theatrical forms, is located in the Radio-Television Communication Building next door.

M.A. PROGRAM OF STUDY

History and Criticism

The M.A. degree is fundamentally a scholarly program in history and dramatic literature in pursuance of which the candidate has two options. The basic requirements of 45 hours beyond the baccalaureate degree and the passing of a departmental comprehensive examination may be completed in three quarters of residence, or the candidate may elect to extend his or her residence to four or more quarters. In the latter case a greater diversity of courses may be selected presumably to culminate in from six to 12 hours in a thesis project of a scholarly or critical nature.

M.F.A. PROGRAMS OF STUDY

The M.F.A.s in acting and directing are professional degrees and each requires a minimum of 135 credit hours over a nine-quarter period. The M.F.A. in production design is a professional degree and normally requires a minimum of 135 credit hours over a nine-quarter period, but may also be, with approval of the faculty, a six-quarter program with an 84-hour credit requirement. The M.F.A. in playwriting is a professional degree and covers 72 credit hours of study.

Professional Actor Training Program

The goal of the Professional Actor Training Program (PATP) is to prepare the graduate student for a fulfilled career as an actor by helping to extend vocal, physical, and imaginative capacities; to develop disciplined, reliable techniques for working; and to focus and pinpoint objectives so that he or she has the means to encompass and make an intelligent, responsible contribution to the films, television, or to the many forms of theater.

Admission to the PATP is by audition and interview only and is open to a limited number of mature and motivated candidates. The work is accomplished during a three-year period.

The objectives of the training in the first year are to get the student to understand and achieve a center; a liberation from his or her blocks, barriers, and mannerisms; and a common awareness of the need for honesty, simplicity, and a sense of truth in his or her work free from the pressure of producing quick, superficial results.

The second year is focused on the actor's work on his or her role. Application through scenes, monologues, and plays leads the student to apply the first year's work and enlarge technique to embrace problems of playing character roles, roles more remote from his or her own behavior, and exploring the demands of performing plays more distant in time from his or her own experience.

During the third year of the PATP, the student's training will be divided into three parts conforming to the quarter system. The group will be trisected and three experiences will be offered to each group in turn: internship, touring, and residence.

Minimum requirements for the three-year M.F.A. include 72 credit hours in acting training, 29 credits in acting practicum, 12 credits of internship, and 22 credits of nonacting courses appropriate to the student's development. These should include some courses in history and criticism. Two credit hours of production practicum bring the requirements to a total of 135 credits.

Professional Director Training Program

The Graduate Director Program proposes to train professional directors, available to the demands of commercial, educational, or community theaters. Admission to the program will be on the basis of experience and potential as demonstrated through personal interview, recommendations, and any other pertinent supportive materials.

The three-year sequence is premised on the belief that time and meaningful opportunities are prime ingredients in any training program. It is structured to provide a general orientation in the first year with an emphasis on laboratory experience, the second year concerns itself with extended inquiry into the process itself and is principally dedicated to error, experimentation, exploration, analysis. The third year is designed to test conclusions in a variety of public arenas through the preparation and presentation of a production in one of the school's theaters or an approved equivalent facility, the preparation and presentation of a touring

production, and a quarter in residence with a professional theater company.

Minimum course requirements for the three-year M.F.A. include 78 credits in directing, four credits in acting, eight credits in production design, 12 credits in history and criticism, four credits in administration, 17 elective credits principally outside the School of Theater, and 12 practicum credits for production work for a total of 135 credits.

Professional Program in Production Design and Technology

The Production Design and Technology Program provides the student with the resources and opportunities to continue training in the area of his or her professional specialty (scene, costume, or lighting design; theater technology; or production management). To accomplish this goal, the program requires the designer-technician to practice the creation and integration of a variety of production elements. Scenery, costumes, lighting, properties, and sound are subject to stylistic manipulation in all the visual performance media. The impact generated by a performance environment is dependent on the creative coordination of the production designer.

Admission to this program requires the bachelor's degree and is based on a portfolio of theatrical renderings and draftings (or other graphics), recommendations, theater experience, and academic qualifications for graduate work. A visit to inspect the facilities and an interview with the design staff are optional.

The M.F.A. in production design and technology is offered in two plans.

Two-Year Plan

The two-year plan requires the student to schedule 16 quarter hours in the area sequence he or she chooses as highest priority. Twelve hours will then be scheduled in one of the remaining areas and eight in the other. The student must take eight hours in theater history and one quarter in the production design seminar at the end of the second year. Of the remaining 13 hours of electives, three hours must be outside the School of Theater.

The thesis requirement may be met by a research study, by a creative project, or by 12 hours of approved nonthesis courses. The total requirement is 84 hours, of which 12 hours may be credited to the thesis. The minimum residence requirement is six quarters. A tabulation of the hour requirements follows:

- 16 hours in the first-choice area
- 12 hours in the second-choice area
- 8 hours in the third-choice area
- 8 hours of theater history
- 3 hours in THAR 738 Production Design Seminar (in the spring quarter of the second year)
- 13 hours of electives, three of which must be outside the School of Theater
- 12 hours of thesis or approved nonthesis courses
- 12 hours of production (practicum)
- 84 Total Hours

Area Sequences

Scene Design

- 534 Advanced Scene Design (4)
- 634 Advanced Scene Techniques (4)
- 734 Studies in Scene Design (4-12)

Lighting and Technology

- 530 Technical Direction (4)
- 531 Advanced Lighting (4)
- 630 Advanced Technical Direction (4)
- 631 Advanced Lighting Techniques (4)
- 730 Advanced Technical Studies (4-8)
- 731 Advanced Lighting Studies (4-8)

Costume Design

- 538 History of Costume (4)
- 532 Advanced Costume Design (4)
- 632 Advanced Costume Techniques (4)
- 732 Studies in Costume Design (4-12)

Schedule of Course Offerings

- Fall Quarter: 531, 534, 538, 730, 731, 732, and 734
- Winter Quarter: 530, 532, 631, 634, 730, 731, 732, and 734
- Spring Quarter: 630, 632, 730, 731, 732, 734, and 738

Three-Year Plan

The three-year plan includes a total hour requirement based on a normal load of 15 hours per quarter for nine quarters of required residence. In addition, an opportunity is included for internship and touring experience.

The total requirements of the program are as follows:

Requirement	Credit Hours
Area of First Priority (usually started 1st year, fall)	20
Area of Second Priority (usually started in 1st year)	16
Area of Third Priority (sometimes deferred to 2nd or 3rd year)	12
Theater History	12
THAR 564 Director-Designer Communication (1st year, spring)	3
THAR 633 Tour (2nd year)	12
THAR 733 Internship (2nd year)	15
THAR 639 Independent Study (4 credits each with tour and internship)	8
THAR 739 Seminar in Production Design (3rd year, spring)	3
Electives	14
One course required outside the School of Theater	3
Practicum:	
3 credits each quarter for the first year	9
Total Credits for Program	135

The student will indicate his or her intention to enter the two-year or the three-year program when first consulting with his or her advisor.

Playwriting Program

Admission to the two-year Playwriting M.F.A. Program is premised on the submission of representative examples of previous creative writing and/or personal interview. Continuation in the program is dependent upon satisfactory progress in development of dramatic writing skills and mastery of critical concepts.

The minimum M.F.A. requirement of 72 credit hours will include a major of at least 30 credits in dramatic and/or creative writing and dramatic literature courses, 12 credits in theater history, and 12 elective credits in appropriate courses outside the major. The thesis may be a creative project or a research study.

Individual Interdisciplinary Program of Study Option

Degrees in theater administration/management and musical theater as well as other possible interdisciplinary programs are arranged for an *Individual Interdisciplinary Program* through the Office of the Associate Provost for Graduate and Research Programs. This option allows the student, with a faculty committee, to design a curriculum to suit his or her needs.

Look under *Individual Interdisciplinary Programs* in the course descriptions for more information. Both the School of Theater and the Office of the Associate Provost for Graduate and Research Programs must be contacted by students wishing to do an IIP with coursework in the School of Theater.

500 Introduction to Graduate Study (2)

Prereq: grad theater major. Orientation to grad theater study and professional theater.

Staff; F; Y.

502 Theater Management (4)

Management in performing arts. 3 lec.

Fraze; W; Y.

505 Practicum in Theater Management (2-4)

Prereq: perm. Supervised lab practice in problems of theater publicity, finance, ticket office, and house management.

Staff; F, W, Sp, Su; Y.

510A Acting Technique I (6)

Prereq: grad acting majors. Intensive studio training emphasizing actor's work on himself or herself and on text through exercises, monologues, and scene work.

Sander; F; Y; 1976.

510B Acting Technique II (6)

Prereq: 510A. Continuation of 510A. See 510A for description.

Sander; W; Y; 1977.

510C Acting Technique III (6)

Prereq: 510B. Continuation of 510A and 510B. See 510A for description.

Sander; Sp; Y; 1977.

515 Practicum in Acting (2-4)

Prereq: perm. Supervised lab practice in rehearsal and performance.

Staff; F, W, Sp, Su; Y.

516A Movement for the Actor (3)

Prereq: grad acting major. Concentrated regular training in movement skills for stage, emphasizing discipline, poise, agility, flexibility, and freedom. Specific skills such as dance, fencing, and combat may be introduced.

Gabriel-Murray; F; Y.

516B Movement for the Actor (3)

Prereq: 516A. Continuation of 516A. See 516A for description.

Gabriel-Murray; W; Y.

516C Movement for the Actor (3)

Prereq: 516B. Continuation of 516A and 516B. See 516A for description.

Gabriel-Murray; Sp; Y.

517A Voice and Speech for the Actor (3)

Prereq: grad acting major. Intensive training to develop actor's basic voice and speech skills. Introduction to and proficiency in perception of physical sensations pertaining to voice and speech.

Parrotti; F; Y.

517B Voice and Speech for the Actor (3)

Prereq: 517A. Continuation of 517A. See 517A for description.

Parrotti; W; Y.

517C Voice and Speech for the Actor (3)

Prereq: 517B. Continuation of 517A and 517B. See 517A for description.

Parrotti; Sp; Y.

520A First Principles of Directing (4)

Prereq: grad directing major. First inquiry into nonactor-related prerehearsal considerations, text selection, analysis, space, and environment in relation to concept and design.

Sherman; F; Y.

520B Working with the Actor (6)

Prereq: 520A. Scene work with actors utilizing concept and project explored during previous qtr.

Sherman; W; Y.

520C Directing Project I (6)

Prereq: 520B. Basic rehearsal techniques and procedures.

Sherman; Sp; Y.

524 Director-Designer Communication (3)

Prereq: perm. Techniques and procedures used by directors and designers in preparing a production.

Staff; Sp; Y.

525 Practicum in Directing (2-4)

Prereq: perm. Practical experience as directorial staff member for production in public performance, or as director for lab theater experience.

Staff; F, W, Sp, Su; Y.

526 Stage Management (3)

Prereq: perm. Theoretical course in techniques and methods of professional stage management.

Staff; F; Y.

530 Technical Direction (4)

Role and responsibilities of technical director.

St. Lawrence; W; Y.

531 Advanced Lighting (4)

Prereq: perm. Light as element of design.

St. Lawrence; F; Y.

532 Advanced Costume Design (4)

Prereq: 538. Advanced problems and projects in theatrical costume.

Fox; W; Y.

534 Advanced Scene Design (4)

Prereq: perm. Scene design styles of premodern drama; theory and practices.

Lacy; F; Y.

535 Practicum in Design and/or Technical Production (2-6)

Prereq: perm. Practical application of design and technical theory.

Staff; F, W, Sp, Su; Y.

537 Studies in Makeup (3)

Prereq: perm. Advanced problems in theatrical makeup design and execution.

Fox; F, W; Y.

538 History of Costume (4)

Development of costume from pre-Greek era; emphasis on clothing as reflection of western cultural development.

Fox; F; Y.

550 Playwrights Workshop (3, max 9)

Prereq: perm and prior approval and acceptance of scripts. Practical workshop study and production of plays written by students.

Quinn; W, Sp, Y.

575 Dramatic Criticism I (4)

Principles of dramatic criticism from Aristotle to modern theater. 3 lec.

Quinn; F; Y.

576 Dramatic Criticism II (4)

Prereq: 575 or perm. Modern dramatic criticism from time of Ibsen to present. 3 lec.

Quinn; W; Y.

580 Musical Theater Projects (2-4, max 12)

Prereq: perm. Participation in selected musical theater projects announced in advance of registration. Orientation may be either research or production.

Staff; F, W, Sp, Su; Y.

605 Practicum in Theater Management (2-4)

Prereq: perm. Supervised lab practice in problems of theater publicity, finance, ticket office, and house management.

Staff; F, W, Sp, Su; Y.

610A Advanced Problems in Acting and Performance (6)

Prereq: 510C. Continued intensive studio training centering on audition material, characterization, and special problems such as period plays and experimentation.

Sander; F; Y; 1976.

610B Advanced Problems in Acting and Performance (6)

Prereq: 610A. Continuation of 610A. See 610A for description.

Sander; W; Y; 1977.

610C Advanced Problems in Acting and Performance (6)

Prereq: 610B. Continuation of 610A and 610B. See 610A for description.

Sander; Sp; Y; 1977.

615 Practicum in Acting (2-4)

Prereq: perm. Supervised lab practice in rehearsal and public performance of roles.

Staff; F, W, Sp, Su; Y.

616A Advanced Movement for the Actor (3)

Prereq: 516C. Continuation of work in 516ABC. More complex physical demands and exercises involved. Problems in specific plays dealt with; and polish and style emphasized.

Gabriel-Murray; F; Y.

616B Advanced Movement for the Actor (3)

Prereq: 616A. Continuation of 616A. See 616A for description.

Gabriel-Murray; W; Y.

616C Advanced Movement for the Actor (3)

Prereq: 616B. Continuation of 616A and 616B. See 616A for description.

Gabriel-Murray; Sp, Y.

617A Advanced Voice and Speech for the Actor (3)

Prereq: 517C. In-depth extension of work started in 517ABC. Advanced techniques to refine further and develop use of voice and speech as instrument for characterization.

Parrotti, F, Y.

617B Advanced Voice and Speech for the Actor (3)

Prereq: 617A. Continuation of 617A. See 617A for description.

Parrotti, W, Y.

617C Advanced Voice and Speech for the Actor (3)

Prereq: 617B. Continuation of 617A and 617B. See 617A for description.

Parrotti, Sp, Y.

620A Individual Projects in Directing (6)

Prereq: 520C. Working with full-length text in class or lab theater/playwright's workshop presentation. Emphasis on scripted materials in forms and modes previously unfamiliar to student.

Sherman, F, Y.

620B Improvisational Techniques in Directing (4)

Prereq: perm, 2nd yr grad director. Working with nonscripted material under leadership of master teacher.

Sherman; W; Y.

620C Advanced Individual Projects (6)

Prereq: 620A. Working with full-length text in class or lab theater/playwright's workshop presentation. Emphasis on new areas of examination.

Sherman; Sp; Y.

621 Directors on Directing (2)

Prereq: 520A,B,C or perm. Theoretical and historical readings and discussion.

Sherman; W; Y.

625 Practicum in Directing (2-4)

Prereq: perm. Practical experiences in directing actors in special projects outside of class, i.e., lab theater, playwright's workshop, or other approved assignments.

Staff; F, W, Sp, Su; Y.

626 Practicum in Stage Management (2-4)

Prereq: 526. Practical experience in production stage management.

Staff; F, W, Sp, Su; Y.

630 Advanced Technical Direction (4)

Prereq: 530.

Lacy; Sp; Y.

631 Advanced Lighting Techniques (4)

Prereq: 531.

Lacy; W; Y.

632 Advanced Costume Design (4)

Prereq: 532.

Fox; Sp; Y.

633 Touring: Production Design (12)

Prereq: grad production design major. Practical course to familiarize advanced design and technical production students with solution of problems inherent in touring theatrical productions.

Staff; F, W, Sp, Su; Y.

634 Advanced Scene Techniques (4)

Prereq: 534.

Lacy; W; Y.

635 Practicum in Design and/or Technical Production (2-6)

Prereq: perm. Practical application of design or technical theory in planning and execution of University production in 2nd yr of training.

Staff; F, W, Sp, Su; Y.

639 Independent Studies in Design and/or Technical Theater (1-6)

Prereq: perm.

Staff; F, W, Sp, Su; Y.

680 Advanced Musical Theater Projects (2-4)

Prereq: 580. Advanced projects in musical theater presentations (may be repeated for max of 12 units).

Staff; F, W, Sp, Su; Y.

689 Independent Studies in Musical Theater (1-6)

Prereq: perm.

Staff; F, W, Sp, Su; Y.

690 Directed Instruction (1-3, max 9)

Prereq: perm. Supervised practice in instructing.

Staff; F, W, Sp; Y.

695 Thesis (1-12)

Prereq: perm.

Staff; F, W, Sp; Y.

702 Theater Administration (4)

Organization and administration of educational, community, and resident theater.

Fraze; Sp; Y.

705 Practicum in Theater Management (2-6)

Prereq: 505 or 605 and 702. Specialized lab projects relating to management of Ohio University Theater.

Staff; F, W, Sp, Su, Y.

709 Independent Studies in Theater Management (1-6)

Prereq: perm.

Staff; F, W, Sp, Su, Y.

710 Touring for Actors (12)

Prereq: 510A,B,C; 610A,B,C, and perm. Work in acting through

scenes, plays, and exercises under cooperative, integrated touring conditions.

Staff; F, W, Sp, Su; Y.

713 Internship in Acting (6-15)

Prereq: 510A,B,C; 610A,B,C, and perm. Residence with professional theatrical company.

Staff; F, W, Sp; Y.

715 Practicum in Acting (4-6)

Prereq: 510A,B,C; 610A,B,C. Performance of leading roles in major productions.

Staff; F, W, Sp; Y.

719 Independent Studies in Acting (1-6)

Prereq: acting major.

Staff; F, W, Sp; Y.

720 Touring for Directors (12)

Prereq: 520A,B,C; 620A,B,C. Preparation, rehearsal, and presentation of performance project (play or assemblage) for extended tour, including workshop demonstrations where appropriate.

Staff; F, W, Sp, Su; Y.

723 Internship in Directing (6-15)

Prereq: 520A,B,C; 620A,B,C. Residence with professional theatrical company.

Staff; F, W, Sp, Su; Y.

728 Thesis Production for Directors (12)

Prereq: 520A,B,C; 620A,B,C. Preparation, rehearsal, and presentation of fully mounted play for public performance.

Staff; F, W, Sp; Y.

729 Independent Studies in Directing (1-6)

Prereq: perm.

Staff; F, W, Sp; Y.

730 Advanced Technical Studies (4, max 8)

Prereq: perm.

Lacy; F, W, Sp; Y.

731 Advanced Lighting Studies (4)

Prereq: 631.

Lacy; F, W, Sp; Y.

732 Studies in Costume Design (4, max 12)

Prereq: 632.

Fox; F, W, Sp; Y.

733 Internship in Design or Technical Production (6-15)

Prereq: 2nd or 3rd yr grad production design major. Residence with professional theatrical company.

Staff; F, W, Sp, Su; Y.

734 Studies in Scene Design (4, max 12)

Prereq: perm.

Lacy; F, W, Sp; Y.

735 Practicum in Design and/or Technical Production (2-6)

Prereq: perm and 3rd yr production design major. Practical application of design or technical theory in planning and execution of University production in 3rd yr of training.

Staff; F, W, Sp; Y.

738 Seminar in Production Design (3)

Prereq: perm.

Lacy; Sp; Y.

750 Seminar in Dramatic Writing (4-8, max 16)

Prereq: perm.

Quinn; F, W, Sp; Y.

759 Independent Studies in Playwriting (1-6)

Prereq: perm.

Staff; F, W, Sp; Y.

770 Greek Theater and Drama (4)

1st in series of 8 seminars covering in-depth theater and drama of western world from prehistoric times to contemporary. 3 lec.

Conover; F; Y.

771 Roman and Medieval Theater (4)

Conover; W; Y.

772 Renaissance Theater and Drama (4)

Conover; Sp; Y.

773 Restoration and 18th Century Theater (4)

Quinn; D.

774 Baroque European Theater (4)

Quinn; F; Y.

775 19th Century European Theater (4)

Quinn; W; Y.

776 Contemporary Theater (4)

Quinn; Sp; Y.

777A Studies in American Theater and Drama: 18th and 19th Century (4)

Prereq: perm. Intensive study in some aspect of early American theater history or drama.

Kaufman; F; Y.

777B Studies in American Theater and Drama: 1900-1945 (4)

Prereq: perm. Intensive study in some aspect of new American theater and drama.

Kaufman; W; Y.

777C Studies in American Theater and Drama: 1945-Present (4)

Prereq: perm. Intensive study in some aspect of post-WW II American theater and drama.

Kaufman; Sp; Y.

779 Independent Studies in History and Criticism (1-6)

Prereq: perm.

Staff; F, W, Sp; Y.

870 Seminar in Theater History (4)

(May be repeated as topic changes.)

Quinn; Sp; A; 1976.

875 Seminar in Dramatic Criticism (4)

(May be repeated as topic changes.)

Quinn; Sp; A.

ZOOLOGICAL AND BIOMEDICAL SCIENCES

Zoology

Microbiology

Admission to graduate study in zoology or biomedical sciences requires a bachelor's degree with a strong background in the biological and physical sciences, including calculus, organic chemistry, and physics. Results of verbal, quantitative, and advanced (biology or a physical science) tests of the Graduate Record Examination are required of all applicants. These scores, along with application, transcripts, and three letters of recommendation, should be received by March 1 for prospective students to be considered for financial support during the following academic year, although applications are accepted at any time. Applicants whose native language is not English may substitute scores from the Test of English as a Foreign Language (TOEFL), or its equivalent, for the verbal portion of the Graduate Record Exam.

Master's students must complete 45 quarter hours, with at least 30 being in formal courses and seminars. A nonthesis master's program is available for secondary school and junior college teachers. Doctoral students should complete 135 quarter hours (beyond the bachelor's degree), with at least 45 quarter hours in formal courses and seminars. Proficiencies in a foreign language and in computer studies or statistics are required for doctoral candidacy. At least one quarter of supervised teaching within the department is required of all master's students and two quarters are required of doctoral students.

Areas of graduate study include aquatic biology, entomology, ecology, animal behavior, evolutionary biology, microbiology, immunology, cell and developmental biology, ultrastructure, functional morphology, neurobiology, physiology, and pharmacology.

Zoology

503 Comparative Vertebrate Anatomy (6)

Prereq: perm. Comparative study of body systems of vertebrates with lab work covering various vertebrate forms. 4 lec; 5 lab.

Allen; W, S; Y.

504 Comparative Vertebrate Anatomy — Mammalian (6)

Prereq: 503 or equiv. Anatomy of mammals with particular emphasis on cat. 3 lec, 6 lab.

Allen; F; Y.

506 Vertebrate Embryology (6)

Prereq: perm. Development from gametogenesis to organogenesis in representative vertebrate types with lab emphasis given to chick and pig. 4 lec, 4 lab.

Peterson; W; Sp; Y.

508 Histology (6)

Prereq: perm. Cells, tissues, and organ systems with regard to their morphological and physiological properties. 4 lec, 4 lab.

Heck; W; Y.

529 Marine Biology (5)

Prereq: perm. Biological processes in marine and estuarine habitats, and adaptations for life in sea; emphasis on environmental variables affecting distribution, abundance, and dynamics of marine organisms. Includes 12-dy field trip to tropical marine environment during spring break and 5-dy field trip to temperate marine zone. 3 lec, field trips (estimated cost/student, \$200). Project required.

Hummon; Sp; Y.

530 Invertebrate Zoology (6)

Prereq: perm. Structure, function, systematic, and ecological relationships among full range of phyla. 4 lec, 4 lab. Project or paper required.

Hummon; F; Y.

531 Limnology (4)

Prereq: perm. Physical, chemical, and biological processes in freshwater habitats; distribution, abundance, and dynamics of populations; structure, organization, and productivity of communities. 4 lec. Paper required.

Hummon; W; Y.

532 Field Hydrobiology (3)

Prereq: 531 or perm. Methods and analysis of field collection data from standing and running water ecosystems, with emphasis on community structure and function under natural and polluted water conditions; special reference to acid mine pollution. 6 lab. Project required.

Hummon; Sp; Y.

534 Biology of Spiders (5)

Prereq: perm. Morphology, physiology, behavior, ecology, and classification of spiders. Lab includes taxonomic and behavioral studies. 3 lec, 4 lab.

Rouner; F; A.

535 General Entomology (6)

Prereq: perm. Overview of morphology, systematics, physiology, and general biology of insects. 3 lec, 6 lab.

Romoser; F; Y.

537 Medical Entomology (4)

Prereq: perm. Relationship of insects and related arthropods to human disease. 3 lec.

Romoser; W; A.

538 Topics in Insect Physiology (3)

Prereq: perm.

Romoser; D.

539 Field Entomology (5)

Prereq: perm. Systematics, evolution, ecology, and behavior of insects with emphasis on field collection and identification. 3 lec, 4 lab.

Romoser; Sp; Y.

540 Sociobiology (3)

Prereq: 479, perm. Current understanding of how and why animal social behavior evolved, including spacing, mating, and parental behavior of solitary as well as social animals. Lec, readings, and reports. 3 lec.

Svendsen; Sp; A.

541 Parasitology (6)

Prereq: perm. Etiology of human parasites, their transmission, diagnosis, and prevention. 3 lec, 6 lab.

Heck; Sp; Y.

545 Physiology of Exercise (4)

Prereq: perm. Fundamental concepts describing reaction of organ systems to exercise/muscle metabolism and work evaluation; special reference to physical fitness, sport conditioning, and environmental adaptations to exercise. 4 lec. (Same as HPES 414/514.)

Dudley; F; Y.

546 Physiology of Exercise Laboratory (2)

Prereq: perm; required for those enrolled in 445/545. Lab experiences designed to complement 445/545. 4 lab.

Dudley; F; Y.

548 Cell Physiology (4)

Prereq: physics, organic chemistry. Physical and chemical processes common to many cells.

Howell; F; Y.

549 Cell Physiology Laboratory (4)

Prereq: 548 or perm. Lab experiments designed to illustrate experimental bases of principles discussed in 548. 6 hrs lab.

Wilson; Sp; D.

550 Principles of Endocrinology (4)

Prereq: 560 or 548 recommended. Endocrine control of mammalian homeostasis and metabolism. 4 lec.

Jones; F; Y.

551 Endocrinology Laboratory (4)

Prereq: 550. Experimental techniques pertinent to study of endocrine glands including surgical ablation. 6 lab.

Jones; Sp; Y.

557 Animal Systematics (4)

Prereq: perm. Review of methods and principles of systematic biology, taxonomy, and historical biogeography which have been recently modernized and computerized. Numerical methods and hypothetico-deductive reasoning applied to study of organismic diversity (taxonomy) and geographic distribution (biogeography). 3 lec, 2 lab.

Moody; W; Y.

560 Animal Physiology (4)

Prereq: perm. General and comparative physiology emphasizing principal functions underlying life processes. Emphases on physiological adaptations to environment and neurophysiological systems. 4 lec.

Wilson; W; Y.

561 Animal Physiology Lab (4)

Prereq: 560 or perm. Lab exercises designed to illustrate experimental bases of principles discussed in 560. 6 hrs lab.

Wilson; Sp; Y.

563 Cell Chemistry (4)

Prereq: perm. Chemistry of carbohydrates, lipids, proteins, and nucleic acids. Principles of enzyme activity and kinetics; metabolic pathways. 4 lec.

Wilson; McQuate; F; Sp; Y.

566 Comparative Neurophysiology (4)

Prereq: perm. Comparative examination of nervous systems of vertebrates and invertebrates. Mechanisms of neural integration studied at cellular level, with emphasis on control of simple, stereotyped behavior patterns.

Staff; W; Y.

568 Ichthyology (4)

Prereq: perm. Lecture course emphasizing important aspects of biology of major families of fishes, both freshwater and marine. Topics include features of morphology, physiology, taxonomy, evolution, ecology, behavior and zoogeography of this most numerous and diverse group of vertebrates.

Eastman; Sp; D.

572 Herpetology (5)

Prereq: 20 hrs zoology. Overview of biology of amphibians and reptiles with heavy emphasis on field work. 3 lec, 3 lab and field.

Seibert; Sp; Y.

573 Animal Behavior (5)

Prereq: perm. Ecological, physiological, and developmental approaches to behavior, all from perspective of evolutionary biology. 4 lec, 2 lab.

Rouner; W; A.

574 Mammalogy (6)

Prereq: perm. Mammals; their origin, evolution and adaptations, geographical distribution, ecology and systematics. Emphasis on local fauna. Field project required. 4 lec, 4 lab.

Svendsen; F; Y.

575 Animal Ecology (3)

Prereq: perm. Relation of animals to their habitat, to each other, and to humans. General principles of terrestrial and aquatic communities, ecosystems, and human involvement. 3 lec.

Seibert; W; Y.

577 Population Ecology (4)

Prereq: perm. Quantitative aspects of sampling and population estimates, demography and population growth, competition and predation, and community diversity and similarity. 3 lec, 2 problem sessions. Paper required.

Hummon

578 Population Ecology Laboratory (3)

Prereq: perm. Lab and field exercises designed to illustrate and supplement ecological concepts treated in 577. 6 lab and field. Project required.

Hummon; F; D.

579 Evolution (4)

Prereq: 325. Current concepts of evolutionary processes, sources of variability, adaptation, speciation, coevolution, and phylogeny. Lec, readings, and 2 reports. 4 lec.

Svendsen; W; Y.

580 Biological Research Methods (2-4)

Prereq: perm.

Graduate faculty; F, W, Sp; Y.

580A Microscopy and Photomicrography (3)

Prereq: perm. Principles, techniques, and applications of light microscopy including darkfield, phase-contrast, polarizing fluorescence, and interference-contrast methods. Introduction to techniques of recording microscope images. Arr.

Peterson; F; Y.

585 Physiological Process in Mammals I (3)

Prereq: perm. 2-qr course, designed for advanced undergrads and beginning grad students, concerned with analysis of organ systems and control strategies employed by higher organisms, emphasizing human organ systems and aimed at developing ability to predict whole-body responses to physiological challenges.

Portanova, Howell, Costello; W; Y.

586 Physiological Processes in Mammals II (3)

Prereq: perm. 2-qr course, designed for advanced undergrads and beginning grad students, concerned with analysis of organ systems and control strategies employed by higher organisms, emphasizing human organ systems and aimed at developing ability to predict whole-body responses to physiological challenges.

Portanova, Howell, Costello; Sp; Y.

587 Physiological Laboratory Apprenticeship (6, max 12)

Prereq: concurrent enrollment in 585, 586, or perm. Provides in-depth introduction to contemporary lab techniques, lab operation, and research methodology in selected areas of physiology and pharmacology. Lab apprenticeships form 2-qr sequence which requires enrollment for 6 credits each qr.

Staff; W, Sp; Y.

652 Advanced Endocrinology (3-4)

Prereq: perm. Discussion of current research in mammalian endocrinology. Emphasis on reproduction controls and mechanisms. 3 lec.

Jones; W; Y.

653 Current Topics in Biological Transport (3)

Prereq: 585, 586, or perm. Advanced lecture-seminar: critical study of literature and research methods pertaining to physiology of biological transport.

Ehrenspeck; F; A.

654 Physiology of Work and Fatigue (3)

Prereq: 585, 586, 587, or perm. Lecture-seminar utilizing current literature as basis for detailed discussion of contemporary facts and theories concerning influence of acute and chronic exercise upon physiological processes in mammals. Major areas include skeletal muscle, cardiovascular, endocrine, neuromuscular, and respiratory physiology.

Dudley; W; A.

655 Cardiovascular Physiology (3)

Prereq: 585, 586, or perm. Advanced lecture-seminar course for grad students specializing in physiology. Hemodynamics, normal physiology of heart and vascular system, and control of cardiovascular function. 3 lec.

Foley, Akbar; S; A.

670 Biostatistics I (5)

Prereq: perm. Application of univariate statistics to biology; descriptive statistics, distributions, hypothesis testing, analysis of variance, linear regression, correlation, and analysis of frequencies. 4 lec and arr.

Svendsen; W; Y.

680 Techniques in Electron Microscopy (6)

Prereq: perm. Principles and methods for preparation of biological specimens for ultrastructural analysis and research, and some associated techniques. Instruction in microscope operation and maintenance and darkroom techniques. Arr. Lab project and paper required.

Hikida; F; Y; W, A.

682 Advanced Topics (1-3)

Prereq: perm. Specialized topics not otherwise available to advanced students.

Graduate faculty; F, W, Sp; Y.

685 Research in Zoology (1-15)

Prereq: perm. Unspecified research, not directly applicable to thesis.

Graduate faculty; F, W, Sp, Su; Y.

695 Master's Thesis (1-15)

Prereq: perm. Research directly applicable to thesis.

Graduate faculty; F, W, Sp, Su; Y.

709 Biological Ultrastructure (3)

Prereq: perm. Investigation of cells, organelles, and some organ systems, correlating data on their ultrastructure, chemistry, and function. 3 lec.

Hikida; W; A.

730A Insect Biology (1-2, max 6)

Prereq: perm. Advanced topics in entomology.

Romoser; D; Y.

730B Arachnology (1-2, max 6)

Prereq: perm. Selected aspects of physiology, behavior, ecology, systematics of spiders and other arachnids.

Rouner; D.

750A Muscle Biology (1-5)

Prereq: perm. Topics in muscle structure, function, development, disease, and relationship with nervous system. Different aspects of muscle biology covered each term, and topics chosen on basis of need or requests of interested students.

Hikida; F, Sp; Y.

770A Animal Communication (1-2, max 6)

Prereq: perm. Advanced study in zoosemiotics; evolutionary aspects of form and function of signal, transmission channel, and receiver.

Svendsen, Rouner; D.

770B Theoretical Ecology (1-6)

Prereq: perm. Examination of ecological problems from theoretical and mathematical standpoint.

Hummon, Svendsen; W; D.

770D Social Organization in Mammals (2)

Prereq: perm. Advanced study of evolution and ecology of social organization in mammals. Lec, readings, and discussion.

Svendsen; F; A.

770E Aquatic Ecosystems (1-2, max 6)

Prereq: perm. Critical study of literature and research methods pertaining to nonpolluted and polluted ecosystems. Arr.

Hummon; W; D.

770F Ecology of Benthic Micrometazoa (1-2, max 6)

Prereq: perm. Critical study of literature and research methods pertaining to meiofauna (interstitial fauna, psammon) of aquatic and soil ecosystems. Arr.

Hummon; W; D.

779 Experimental Animal Ecology (6)

Prereq: perm. Research methods in ecology with emphasis on collecting, quantifying, and portraying data obtained during course; population density, dispersion, dynamics, and interactions; community productivity, metabolism, and succession. 2 lec, 6 lab and field, and arr.

Hummon; F; D.

780 Neurophysiological Techniques (6)

Prereq: perm. Intensive examination of electrophysiological techniques employed in neurophysiological research. Emphasis on microelectrode recording methods.

Staff; W; D.

870 Biostatistics II (5)

Prereq: perm. Application of multivariate statistics to biology; multiple regression and correlation, principal components, canonical correlation, discriminant function, and factor analysis. Project in experimental design and analysis of data. 4 lec and arr.

Svendsen; S; A.

880 Techniques in Electron Microscopy (6)

Prereq: perm. Principles and methods for preparation of biological specimens for ultrastructural analysis and research, and some associated techniques. Instruction in microscope operation and maintenance and darkroom techniques. Lab project and paper required.

Hikida; F, Y; W, A.

895 Doctoral Dissertation (1-15)

Prereq: perm. Research directed toward doctoral degree.

Graduate faculty; F, W, Sp, Su; Y.

Microbiology

511 General Microbiology (6)

Prereq: perm. Properties of microorganisms and their importance in our environment. Lab training in common microbiological methods. 3 lec, 6 lab.

Maier, Downey; F, W; Y.

512 Microbiological Techniques (6)

Prereq: 511, perm. Semi-independent course gives microbiology majors extensive experience in use of bacteriological techniques and equipment; information retrieval. 2 lec, 8 lab.

Maier; W; Y.

513 Pathogenic Bacteriology (6)

Prereq: 511. Microorganisms in relation to disease. Disease manifestations, diagnostic, and control methods; some aspects of immunity. 3 lec, 6 lab.

Lawrence; W; Y.

515 Immunology (6)

Prereq: 511. Fundamental concepts of immunity, how produced, advantages and disadvantages; fundamental immunological phenomena. 3 lec, 6 and arr lab.

Walker; Sp; Y.

518 Epidemiology (4)

Prereq: 511, 537 or 541 and perm. Model of spread, cure, and prevention of communicable diseases in humans. 3 lec, 2 lab.

Walker; F; Y.

527 Molecular Genetics (3)

Prereq: perm. Gene action and fine structure; biochemistry of heredity; cytoplasmic inheritance. 3 lec.

Staff; D.

611A Advanced Microbiology (3)

Prereq: perm. World of microorganisms, their properties and their importance in our environment. 3 lec.

Staff; F; Y.

611B Advanced Microbiology (3)

Prereq: 611A, perm. Continuation of 611A. 3 lec.

Staff; W; Y.

613 Advanced Pathogenic Microbiology (5)

Prereq: perm. Mechanisms by which microorganisms cause disease. Biochemical determinants of virulence factors. Selected topics on antagonism of host defense mechanisms. 3 lec.

Modrzakowski; Sp; Y.

614 Animal Virology (4)

Prereq: perm. Covers molecular and medical aspects of animal virology. Emphasis on various mechanisms of virus replication and oncogenic transformation. Viral diseases, pathogenic mechanisms, interferon, and antiviral drugs also covered. Lab includes exercises in propagation of tissue culture and animal viruses. 3 lec.

Blue; W; Y.

615 Advanced Immunology (4)

Prereq: perm. Advanced level instruction on genetic and molecular mechanisms controlling humoral and cellular immune responses. Current research topics and immunological research techniques will be overviewed via readings of research periodicals. 3 lec.

Goodrum; F; Y.

616 Immunochemistry (6)

Prereq: 511 and perm. Types of antigens and antibodies; significance in disease and research. Principles and techniques of isolation, purification, and assay. Special immunological phenomena. 3 lec, 6 and arr lab.

Walker; F; Y.

619 Bacterial Physiology (4)

Prereq: 511. Nutrition, function, and metabolism of bacteria; pertinent lab work illustrating fundamental principles and various experimental techniques. 4 lec.

Maier; Sp; Y.

640 Research Techniques in Microbiology I (6)

Prereq: MICR 511. Basic theory and applications of specific research procedures used in microbiology. Special techniques are introduced for isolation and study of microbial cells and their components. Concentration on bacterial cell systems, tissue culture, phagocytosis and complex environments. Fee \$15.00. 3 lec, 6 lab.

Staff; F; Y.

641 Research Techniques in Microbiology II (6)

Prereq: perm. Advanced analytical techniques introduced for application of research procedures in microbiology. Theory and practice of gas-liquid chromatography, density gradient centrifugation, gel electrophoresis, autoradiography, radioisotope tracer techniques and special immunological procedures. Fee \$15.00. 3 lec, 6 lab.

Staff; W; Y.

682 Advanced Topics (1-3)

Prereq: perm. Specialized topics not otherwise available to advanced students.

Graduate faculty; F, W, Sp; Y.

685 Research in Microbiology (1-15)

Prereq: perm. Unspecified research, not directly applicable to thesis.

Graduate faculty; F, W, Sp, Su; Y.

695 Master's Thesis (1-15)

Prereq: perm. Research directly applicable to thesis.

Graduate faculty; F, W, Sp, Su; Y.

720 Microbial Genetics (4)

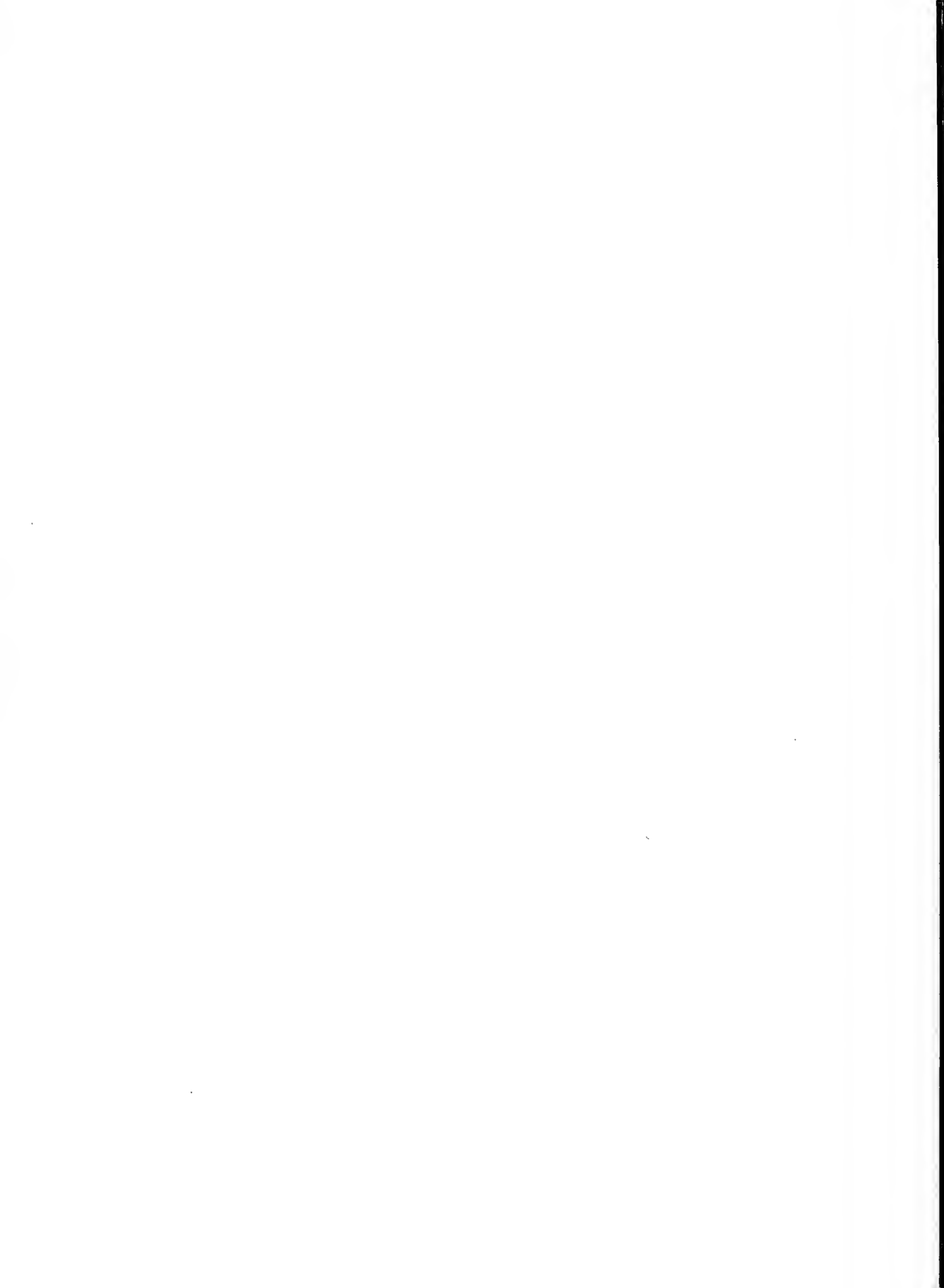
Prereq: 611A, B; biochemistry recommended; perm. Genetics of bacteria, viruses, and selected protists. Techniques and concepts with emphasis on transfer and biochemical expression of genetic material. 4 lec.

Jollick; F; Y.

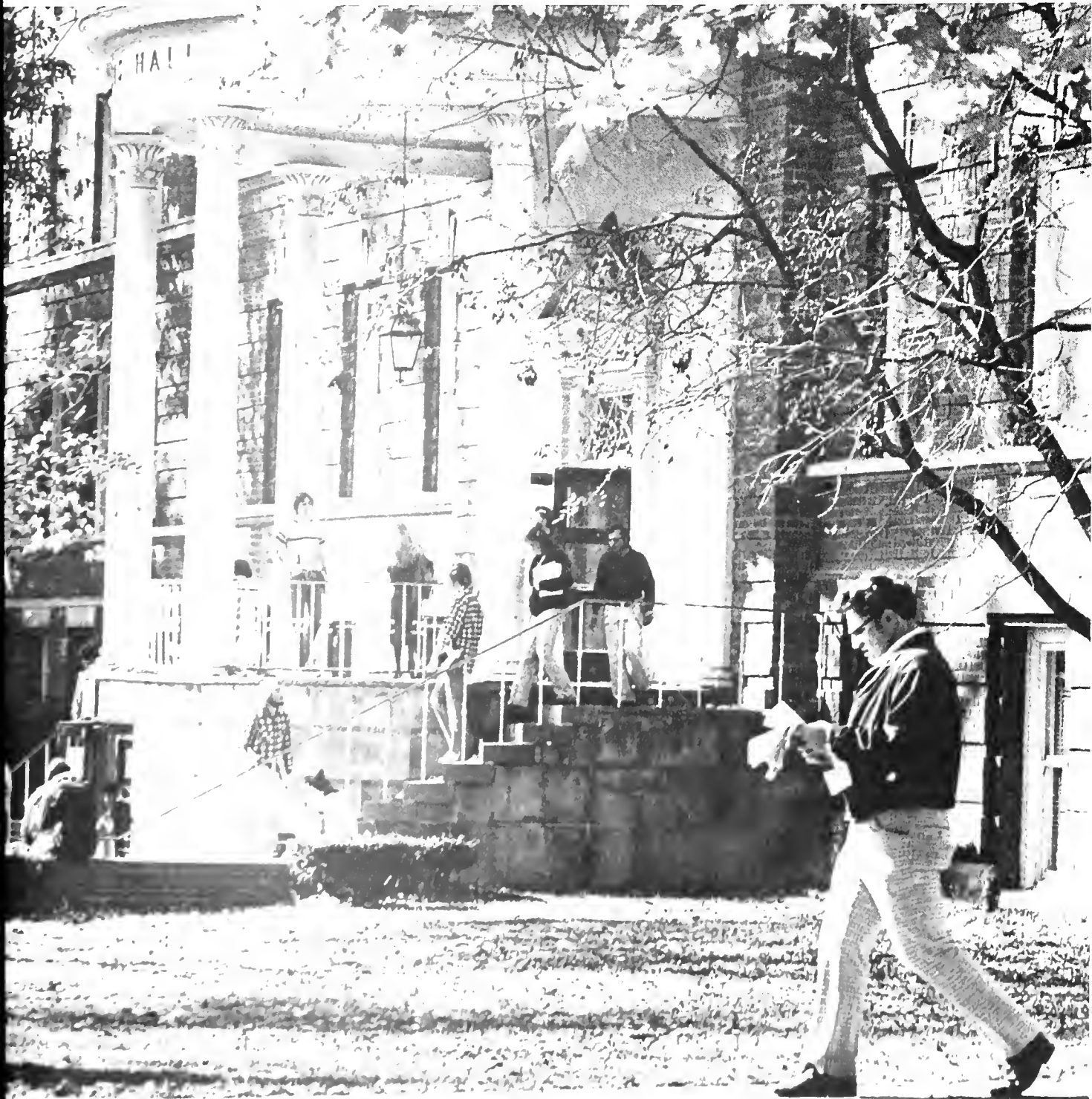
895 Doctoral Dissertation (1-15)

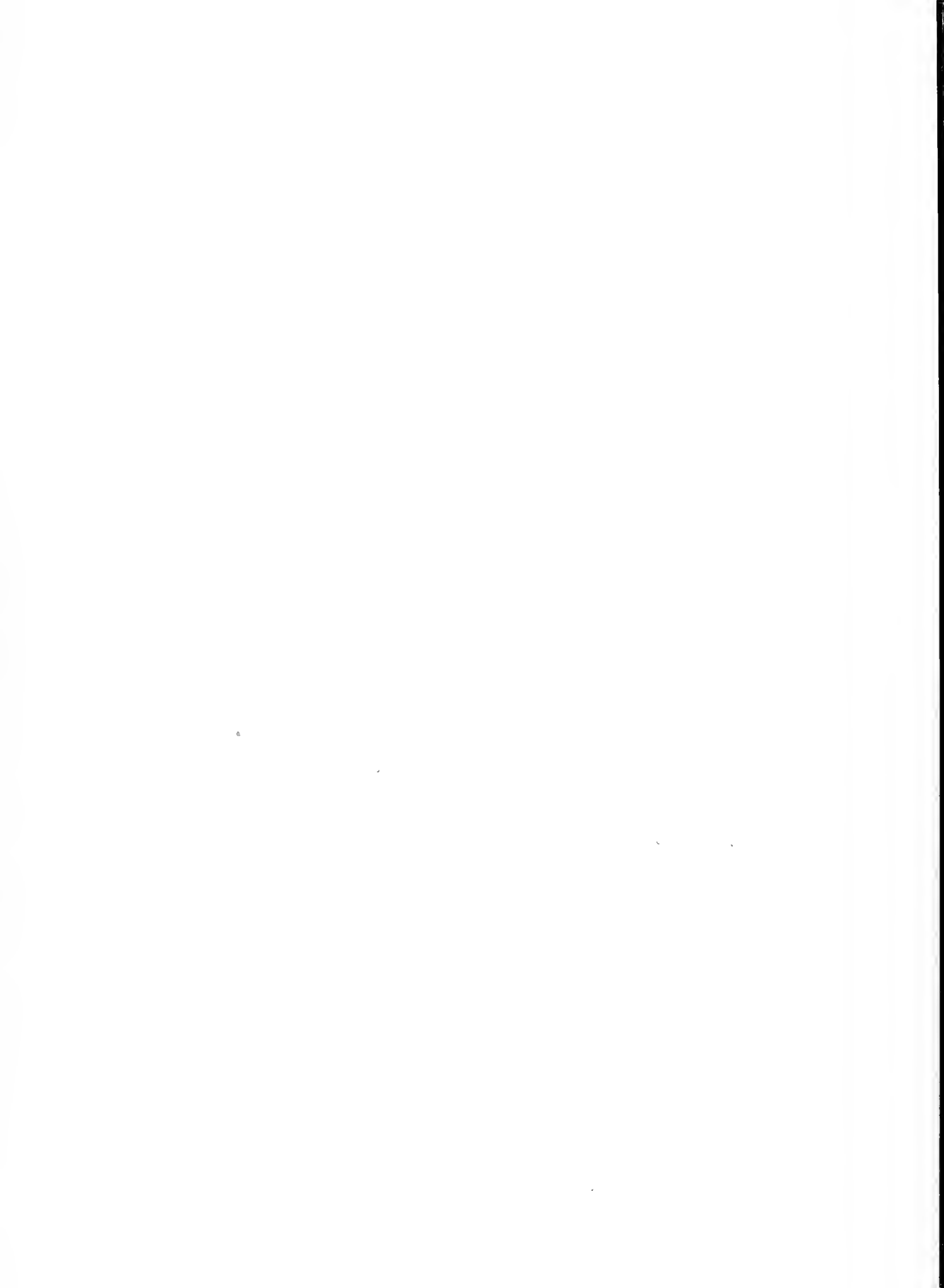
Prereq: perm. Research directed toward doctoral degree.

Graduate faculty; F, W, Sp, Su; Y.



Departmental Faculty





Departmental Faculty

The following listings were submitted by the dean's office in each college in May, 1983, and verified in the Provost's Office. The regional campus faculties are listed after the main campus faculty.

ACCOUNTING

Prof: Charles H. D'Augustine, Ph.D., *Florida State U.*; Warren Reininga, M.C.S., *Indiana U.*, C.P.A.; William Voss, Ph.D., *U. of Chicago*

Assoc. Prof: Ted Compton, Ph.D., *U. of Cincinnati*; James S. Cox, Ph.D., *U. of Pittsburgh*; Clarence B. Stephenson, M.B.A., *George Washington U.*, C.P.A.; Donald V. Stuchell (chairman) M.A.S., *U. of Illinois*, C.P.A.

Asst. Prof: Carol A. Hilton, Ph.D., *U. of Arkansas*; Joseph N. Hilton, Ph.D., *U. of Arkansas*

Instr: Barbara Olejarz, M.B.A., *Ohio U.*; Susan A. Spataro (part-time), M.B.A., *Ohio U.*

AEROSPACE STUDIES

Prof: David L. Mitchel (chairman), M.A., *Central Michigan U.*

Asst. Prof: Larkin R. Smith, M.S., *Central Missouri State*; Richard W. Krapf; Jeffrey D. Montgomery, M.S., *Eastern Illinois U.*

AFRO-AMERICAN STUDIES

Prof: Francine Childs, Ed.D., *East Texas Univ.*

Assoc. Prof: Robert Rhodes, M.A., *U. of Cincinnati*; Vattel T. Rose (chairman), Ph.D., *U. of Minnesota*; Thomas Porter, M.A.T., *Antioch College*

ART

Prof: John Baldwin (part-time), M.F.A., *Instituto Allende*; David Hostettler, M.F.A., *Ohio U.*; Abner Jonas (director), M.F.A., *U. of Iowa*; David R. Klahn, M.F.A., *U. of Wis. Madison*; William Kortlander, Ph.D., *U. of Iowa*; Ronald Kroutel, M.F.A., *U. of Michigan*; Henry Lin (dean), M.F.A., *U. of Washington*; Dana Loomis, M.F.A., *Cornell U.*; Clifford McCarthy, M.S., *U. of Wis. Madison*; Edward Mayer, M.F.A., *U. of Wisconsin*; Gary Pettigrew, M.F.A., *Ohio U.*; Donald Roberts, M.F.A., *Ohio U.*

Assoc. Prof: Robert Borchard, M.S., *U. of Wis.*; Terrill Eiler, M.F.A., *Ohio U.*; Aethelred Eldridge, M.S.D., *U. of Michigan*; Erik Forrest, A.T.D., *U. of Edinburgh*; Arnold Gassan, M.A., *U. of New Mexico*; Karen Null, M.A., *Michigan State U.*; Judith Perani, Ph.D., *Indiana U.*; Gary Schwindler, Ph.D., *U. of Calif. Los Angeles*; Daniel Williams, M.A., *U. of Oregon*; Joseph Zeller, M.F.A., *Alfred U.*

Asst. Prof: Marilyn Hunt, M.A., *Indiana U.*; Mary Manusos, M.F.A., *U. of Wis.*; Edward Pieratt, M.A.

Instr: Molly Alicki (part-time visiting), M.F.A., *California College of Arts & Crafts, Oakland*; Jane Bruce (part-time visiting), M.F.A., *Royal College of Art, London, England*; Sara Gillert (part-time visiting), M.F.A., *Ohio University*; Michael Kroeger (visiting), B.S., *Univ. of Cincinnati*; Charles McWeeny (part-time), M.F.A., *Univ. of Oklahoma*; Yong Soon Min, M.F.A., *U. of Calif.*; Jeanee Redmond, M.F.A., *Clemson University*; Bernard Stone (part-time) M.F.A., *Kansas University*

AVIATION

Prof: Francis Fuller (chairman), B.S., *Ohio U.*

Asst. Prof: Joan Marc, B.S., *Ohio U.*; Lance Dale, M.A., *Ohio U.*

BOTANY

Dist. Prof: Norman Cohn, Ph.D., *Yale U.*

Prof: James Cavender, Ph.D., *U. of Wisconsin*; Laurence Larson, Ph.D., *Purdue U.*; Robert Lloyd, Ph.D., *U. of California at Berkeley*; Charles Miller, Ph.D., *U. of North Carolina, Chapel Hill*; Ivan Smith, Ph.D., *U. of London*; Irwin Ungar (chairman), Ph.D., *U. of Kansas*; Warren Wistendahl, Ph.D., *Rutgers State U.*

Assoc. Prof: James Braselton, Ph.D., *Iowa State U.*; James Graffius, Ph.D., *Michigan State U.*; John Mitchell, Ph.D., *Edinburgh U.*; Gar Rothwell, Ph.D., *U. of Alberta*; Richard Rypma (adjunct), Ph.D., *Ohio State U.*

Asst. Prof: Philip Cantino, Ph.D., *Harvard U.*; Gene Mapes (adjunct), Ph.D., *U. of Iowa*

CHEMISTRY

Dist. Prof: William Huntsman, Ph.D., *Northwestern U.*

Prof: Jesse Day, Ph.D., *Case Inst. of Tech.*; David Hendricker, Ph.D., *Iowa State U.*; Clifford Houk, Ph.D., *Montana State U.*; Robert Ingham, Ph.D., *Iowa State U.*; Robert Kline, Ph.D., *U. of Wisconsin, Madison*; Howard Latz (chairman), Ph.D., *U. of Florida*; Paul Sullivan, Ph.D., *U. of Waterloo*; Robert Sympton, Ph.D., *U. of Illinois*; James Tong, Ph.D., *U. of Wisconsin, Madison*; Thomas Wagner, Ph.D., *Northwestern U.*

Assoc. Prof: John Blazysk, Ph.D., *Brown U.*; Peter Johnson, Ph.D., *U. of Birmingham*; Gary Pfeiffer, Ph.D., *Carnegie-Mellon U.*; Gene Westenbarger, Ph.D., *U. of California, Berkeley*; Robert Winkler, Ph.D., *U. of Michigan*

Asst. Prof: Jared Butcher, Jr., Ph.D., *U. of Tennessee*; Ronald R. Williams, Ph.D., *U. of Georgia*

COMPARATIVE ARTS

Prof: James Conover, Ph.D., *Northwestern U.*; Robert Wortman (chairman), Ph.D., *Florida State U.*

Assoc. Prof: Michael Harper, Ph.D., *U. of NC Chapel Hill*

Asst. Prof: Dorothy Murray, Ph.D., *Ohio U.*; Jessica Timmis, Ph.D., *Ohio U.*

COMPUTER SCIENCE

Prof: Yin-Min Wei, Ph.D., *U. of Iowa*; Richard Butrick, Ph.D., *Columbia University*

Assoc. Prof: Klaus Eldridge (chairman), Ph.D., *U. of Colorado*; J. Craig Farrar, Ph.D., *U. of Illinois*; John Gillam, Ph.D., *Michigan State U.*; Larry E. Snyder, Ph.D., *Purdue U.*

Asst. Prof: Larry Irwin, M.S., *Ohio U.*; Wm. E. Kaulman, Ph.D., *U. of Houston*; Joylyn Reed, Ph.D., *Auburn University*

Visiting Asst. Prof: David B. Jones, M.S., *University of Houston*

DANCE

Prof: Gladys Ballin (director), B.A., *CUNY Hunter College*; Shirley Wimmer (part-time), M.A., *New York U.*

Assoc. Prof: Patricia Welling, B.S., *Wayne State U.*

Asst. Prof: Madeleine Scott, M.A., *U.C.L.A.*; Margaret Tchong, M.F.A., *U. of Utah*

Instr: Eileen Cohan Clark, B.M., *U. of Cincinnati*

Lect: Frederick Krapf; Betty Walberg (visiting), B.A.

ECONOMICS

Dist. Prof: Lowell Gallaway, Ph.D., *Ohio State U.*; Lee Soltow, Ph.D., *U. of Wisconsin at Madison*

Charles O'Brien Prof. Emeritus: Meno Lovenstein (part-time), Ph.D., *Johns Hopkins U.*

Trustees Prof. Emeritus: Harry Crewson (part-time), Ph.D., *Ohio State U.*

Prof: Douglas Adie, Ph.D., *U. of Chicago*; Edwin Charlé, Ph.D., *Indiana U.*; Burton DeVau, Ph.D., *U. of Minnesota*; Ismail Ghazalah, Ph.D., *U. of Calif-Berkeley*; David Klingaman, Ph.D., *U. of Virginia*; Rajindar Koshal (chairman), Ph.D., *U. of Rochester*; David Levinson, Ph.D., *U. of Wisconsin at Madison*; John Peterson, Ph.D., *U. of Chicago*; Vishwa Shukla, Ph.D., *U. of Wisconsin at Madison*; Richard Vedder, Ph.D., *U. of Illinois*

Assoc. Prof: Paul Deuster, Ph.D., *U. of Wisconsin at Madison*; Dana Hewins, Ph.D., *U. of Illinois*; Jan Palmer, Ph.D., *Michigan State U.*

Visiting Assoc. Prof: Krishna Kool, Ph.D., *U. of Tennessee*

Asst. Prof: Khosrow Doroodian, Ph.D., *U. of Oregon*; Rosemary Rossiter, Ph.D., *U. of Wisconsin-Milwaukee*

Visiting Instr: David Kreutzer, M.A., *Virginia Polytechnic Institute*

Prof. Emeritus: Fred Picard (part-time), Ph.D., *Syracuse U.*

EDUCATION — APPLIED BEHAVIORAL SCIENCES AND EDUCATIONAL LEADERSHIP

Prof: Robert Barcikowski, Ph.D., *SUNY State U. Buffalo*; Joel Burdin, Ed.D., *Michigan State*; Fred Dressel, Ed.D., *Indiana U.*; Max Evans, Ph.D., *Ohio State U.*; James Grubb, Ph.D., *Ohio U.*; Luther Haseley, Ed.D., *U. of Toledo*; Donald Knox, Ed.D., *Case Western U.*; Joseph Sligo, Ph.D., *U. of Iowa*; Thomas Sweeney, Ph.D., *Ohio State U.*; Melvin Witmer, Ph.D., *Florida State U.*

Assoc. Prof: Sally Navin, Ph.D., *Ohio State U.*

Asst. Prof: Paul Bredeson, Ph.D., *U. of Wisconsin-Madison*; Glenn Doston, Ph.D., *Northwestern U.*; Crystal Gips, Ed.D., *Boston U.*; James Hartman, Ph.D., *Kent State U.*; Jane Myers, Ph.D., *U. of Florida*

EDUCATION — CURRICULUM AND INSTRUCTION

Morton Prof. of Math Education: Leonard Pikaart, Ed.D., *U. of Virginia*

Prof: Jason Brunk, Jr., Ed.D., *U. of Maryland*; Monroe Johnson, Ed.D., *U. of Tennessee*; Albert Leep, Ed.D., *Ball State U.*; Ragy Mitias, Ph.D., *Ohio State U.*; Allen Myers, Ph.D., *U. of Iowa*; Milton Ploghoft, Ed.D., *U. of Nebraska*; William Rader, Ph.D., *Purdue U.*; Sadek Samaan, Ph.D., *Columbia U.*; Edward Stevens, Jr., Ed.D., *U. of Rochester*; James Thompson, Ph.D., *Ohio State U.*; Roman Warmke, Ph.D., *U. of Minnesota*

Assoc. Prof: Arthur Clubok, Ph.D., *U. of Michigan*; Larry Jageman, Ed.D., *U. of Northern Colorado*; Reba Pinney, Ph.D., *Ohio U.*; Sally Schaaf, Ph.D., *Ohio U.*; Charles Smith, Jr., Ed.D., *Wayne State U.*; Seldon Strother, Ph.D., *Kent State U.*; Barbara van der Veur, Ed.D., *U. of Illinois*; Richard Walker, Ed.D., *Northern Illinois*

Asst. Prof: Gary Bates, Ph.D., *U. of Wisconsin-Madison*; Doris Brodeur, Ph.D., *Indiana U.*; Pamala Byrd, Ph.D., *Indiana U.*; Patricia Hoessli, M.S.E., *Arkansas State U.*; Ralph Martin, Ph.D., *U. of Toledo*; Norma Nutter, Ed.D., *U. of Kentucky*; Sondra Rebottini, Ed.D., *West Virginia U.*; Barbara Reeves, M.S.E., *U. of Arizona*; Sallie Roberts, M.A., *Ohio U.*; Dwight Rogers, Ph.D., *U. of Florida*; Stephen Safran, Ph.D., *U. of Virginia*; Scott Sparks, Ph.D., *U. of Florida*; George Wood, Ph.D., *U. of Illinois*

EDUCATION — CENTER FOR ECONOMIC EDUCATION

Prof: Roman Warmke (director), Ph.D., *U. of Minnesota*

EDUCATION — CENTER FOR HIGHER EDUCATION

Milton Ploghoft (director), Ed.D., U. of Nebraska

EDUCATION — EDUCATIONAL MEDIA CENTER

Doris Brodeur (coordinator), Ph.D., Indiana U.; Dawn O'Neal (cataloger), M.Ed., *Ohio U.*; Sandi Vitek (media technician), M.A., *Michigan State U.*

EDUCATION — PROFESSIONAL LABORATORY EXPERIENCES

Assoc. Prof: Margaret Hoy, M.Ed., *Ohio U.*; Richard Walker (acting director), Ed.D., *Northern Illinois*

Asst. Prof: William Bartels, M.Ed., *Ohio U.*

Instr: Howard Delamatre, M.Ed., *Bowling Green*; Joan Fucci, (part-time), M.S., *U. of Pittsburgh*; Jane Meyers, M.Ed., *Ohio U.*; Marie Roos, Ph.D., *Indiana U.*

ENGINEERING, CHEMICAL

Prof: William Baasel, Ph.D., *Cornell U.*; Calvin Baloun, Ph.D., *U. of Cincinnati*; John Collier, Ph.D., *Case Institute of Technology*; Nicholas Dinos (chairman), Ph.D., *Lehigh U.*; Harold Kendall, Ph.D., *Case Institute of Technology*; Richard Mayer, Ph.D., *U. of Michigan*; Robert Savage, Ph.D., *Case Institute of Technology*; Carleton Sperati (adjunct), Ph.D., *U. of Illinois*

Asst. Prof: Wen-Jia Russell Chen, Ph.D., *Syracuse U.*

Lect: Keith Wamsley (part-time), B.S., *West Virginia U.*

ENGINEERING, CIVIL

Prof: Harry Kaneshige, Ph.D., *U. of Wisconsin-Madison*; Reuben Olson (chairman), Ph.D., *U. of Minnesota*

Assoc. Prof: Fathy Akl, Ph.D., *U. of Calgary*; Glenn Hazen, Ph.D., *Penn State U.*; Edward Russ, M.S.C.E., *Clarkson College of Technology*

Asst. Prof: Tiao Chang, Ph.D., *Purdue U.*; Shad Sargand, Ph.D., *Virginia Polytechnic Institute and State University*

Instr: Kevin Bral, M.S., *Ohio U.*

ENGINEERING, ELECTRICAL AND COMPUTER

Stocker Visiting Prof: Judith Prewitt, Ph.D., *Uppsala University, Sweden*

Prof: Hollis Chen, Ph.D., *Syracuse U.*; Joseph Essman, Ph.D., *Purdue U.*; James Giffert, Ph.D., *Ohio State U.*; Harry Hoffee (part-time), M.S.E.E., *Ohio U.*; Harold Klock, Ph.D., *Northwestern U.*; Richard McFarland, Ph.D., *Ohio State U.*; Satyanarayana Raju (chairman), Ph.D., *Polytechnic Institute of Brooklyn, New York*; Robert Redlich (part-time), Ph.D., *Rensselaer Polytechnic*

Assoc. Prof: Robert Curtis, Ph.D., *New York U.*; Nasser Jaleeli, Ph.D., *Imperial College, London*; Brian Manhire, Ph.D., *Ohio State U.*; Janusz Starzyk, Ph.D., *Technical Univ. of Warsaw*

Asst. Prof: Kent Chamberlin, Ph.D., *Ohio U.*; Albert Fakheri (adjunct), *Polytechnic Institute of Brooklyn, New York*; Robert Lilley, Ph.D., *Ohio U.*; Koji Ogino, Ph.D., *VPI and State U.*; Roger Radcliff, Ph.D., *W. Virginia U.*; Ahmad Sedehi, Ph.D., *University of Pittsburgh*

Instr: Ralph Burhans (part-time), A.B., *Oberlin College*; John Golzy (part-time), M.S., *Ohio U.*; Victor Hanna (part-time), M.S., *Youngstown State U.*

ENGINEERING, INDUSTRIAL AND SYSTEMS

Stocker Visiting Prof: Charles F. James, Jr., Ph.D., *Purdue U.*

Prof: Charles Overby, Ph.D., *U. of Wisconsin-Madison*; Donald Scheck, Ph.D., *Purdue U.*; Ralph Smith (part-time), M.S.M.E., *U. of Wisconsin-Madison*; Robert Williams (chairman), Ph.D., *Ohio State U.*; Helmut Zwahlen, Ph.D., *Ohio State U.*

Asst. Prof: Behrokh Khoshnevis, Ph.D., *Oklahoma State U.*; Kwan S. Lee, Ph.D., *The University of Michigan*

Instr: Russell Kelch (part-time), M.S., *Ohio U.*

ENGINEERING, MECHANICAL

Prof: O. E. Adams, Jr., Ph.D., *Lehigh U.*; Lewis Hicks (part-time), M.S., *Johns Hopkins U.*; Roy Lawrence (chairman), Ph.D., *Southern Methodist U.*; William Beale (adjunct), M.S., *California Inst. of Technology*

Assoc. Prof: Kenneth Halliday, Ph.D., *U. of Massachusetts*; Jay Gunasekera, Ph.D., *U. of London*; Israel Urieli (adjunct), Ph.D., *Witwatersrand Univ.*

Asst. Prof: Ravi Chandran, Ph.D., *Lehigh U.*

Instr: David Berchowitz (adjunct), M.S., *Witwatersrand Univ.*

ENGLISH

Dist. Prof: John Matthews, M.A., *Ohio State U.*; Hollis Summers, Ph.D., *U. of Iowa*

Trustees Prof: Taylor Culbert, Ph.D., *U. of Michigan*

Prof: Laurence Bartlett, Ph.D., *Michigan State U.*; James Davis, Ph.D., *Florida State U.*; Robert DeMott, Ph.D., *Kent State U.*; Wayne Dodd, Ph.D., *U. of Oklahoma*; Raymond Fitch, Ph.D., *U. of Pennsylvania*; Roy Flannagan, Ph.D., *U. of Virginia*; Peter Heidtmann, Ph.D., *U. of Wis. at Madison*; John Hollow, Ph.D., *U. of Rochester*; John Jones, Ph.D., *U. of Florida*; Daniel Keyes, M.A., *CUNY Brooklyn College*; Earl Knies, Ph.D., *U. of Illinois*; Julia Lin, Ph.D., *U. of Washington*; Dean McWilliams, Ph.D., *U. of Oregon*; Lester Marks, Ph.D., *Syracuse U.*; Vance Ramsey, Ph.D., *U. of Oklahoma*; Barry Roth, Ph.D., *Stanford U.*; Duane Schneider (chairman), Ph.D., *U. of Colorado*; Harold Swardson, Ph.D., *U. of Minn.*; Calvin Thayer, Ph.D., *U. of Calif.-Berkeley*; James Thompson, Ph.D., *U. of Cincinnati*; Gerald Udell, Ph.D., *U. of Chicago*; Arvin Wells, Ph.D., *U. of Michigan*; Edgar Whan, Ph.D., *U. of Michigan*

Assoc. Prof: David Bergdahl, Ph.D., *Syracuse U.*; Frank Cronin, Ph.D., *U. of Pittsburgh*; David Heaton, Ph.D., *U. of Michigan*; Reid Huntley, Ph.D., *U. of NC Chapel Hill*; Ernest Johansson, Ph.D., *U. of NC Chapel Hill*; Peter Kousaleos, Ph.D., *Ohio U.*; William Kuhre, Ph.D., *Penn State U.*; Paul Nelson, M.A., *Colgate U.*; Ben Park, Ph.D., *U. of Oklahoma*

Asst. Prof: Marilyn Atlas, Ph.D., *Michigan State U.*; Susan Crowl, Ph.D., *Indiana U.*; Pam Durban, M.F.A., *U. of Iowa*; Janis Holm, Ph.D., *U. of Mich.*; Linda Hunt, Ph.D., *California (Berkeley)*; Betty Pytlík, Ph.D., *Southern California*; Mark Rollins, Ph.D., *U. of Mass.*; Shawn Watson, Ph.D., *Cornell*; Arthur Woolley, Ph.D., *U. of Wis. Madison*

FILM

Assoc. Prof: David Prince, M.F.A., *Ohio U.*

Asst. Prof: Peter Lehman, Ph.D., *U. of Wisconsin-Madison*; George Semsel, M.A., *New York U.*

FINANCE

O'Brien Prof. of Banking and Finance: Kaye Rakes (chairman), D.B.A., *Washington U.*

Prof: Azmi Mikhail, Ph.D., *Ohio State U.*; Harlan Patterson, Ph.D., *Michigan State U.*

Assoc. Prof: Dwight Pugh, Ph.D., *Ohio U.*

Asst. Prof: Bruce S. Berlin, Ph.D. expected, *Michigan State U.*

GEOGRAPHY

Prof: Frank Bernard, Ph.D., *U. of Wisconsin-Madison*; Bob J. Walter, Ph.D., *U. of Wisconsin-Madison*; Hubert Wilhelm, Ph.D., *La St U.*; Lynden Williams, Ph.D., *U. of Kansas*

Assoc. Prof: James Cobban, Ph.D., *U. of Calif Berkeley*; Nancy Bain (chairman), Ph.D., *U. of Minnesota*

Asst. Prof: Hubertus Bloemer, Ph.D., *Union Graduate School*; Ronald Isaac, Ph.D., *Southern Illinois U.*

GEOLOGICAL SCIENCES

Prof: Moid Ahmad (chairman), Ph.D., *U. of London*; Geoffrey Smith, Ph.D., *Ohio State U.*; Thomas Worsley, Ph.D., *U. of Illinois*

Assoc. Prof: Damian Nance, Ph.D., *U. of Cambridge, England*; Ramanantsoa Ramanantsoandro, Ph.D., *U. of Washington*

Asst. Prof: Royal Mapes, Ph.D., *U. of Iowa*; Anthony Socci, Ph.D., *Florida State U.*

Lect: Gene Heien (assoc. chairman), M.A., *Indiana U.*

Emeritus Prof: Stanley Fisher, Ph.D., *Cornell U.*; Willard Phelps, M.A., *Ohio State U.*; Myron Sturgeon, Ph.D., *Ohio State U.*

HEALTH AND SPORT SCIENCES

Prof: Carl D Chambers, Ph.D., *U. of Colorado*; James A Lavery (director), P.E.D., *Indiana U.*

Assoc. Prof: John Bonaguro, Ph.D., *U. of Oregon*; Tiff E. Cook, Ph.D., *Walden U.*; Cliff Hefelfinger, M.S.Ed., *Ohio State U.*; Charles R. Higgins, Ph.D., *U. of North Carolina-Greensboro*; John McComb, M.Ed., *Boston U.*; Freda Phillips, P.E.D., *Springfield College*; Owen J. Wilkinson, Ph.D., *Walden U.*

Asst. Prof: Catherine Brown, M.S.Ed., *Ohio U.*; Ronald Dingle, M.S.P.E., *U. of Massachusetts*; David Jacoby, Ph.D., *Ohio U.*; Joyce King, M.S.Ed., *Ohio U.*; Sue Ellen Miller, P.E.D., *Indiana U.*; Lynn Simon, P.E.D., *Indiana U.*; Ronald Whitaker, M.S.Ed., *Ohio U.*; Richard Woolison, M.S.Ed., *Ohio University*

Instr: James Gilmore (part-time), M.S.Ed., *Ohio U.*; Joan Kappes (part-time), M.S.Ed., *Ohio U.*; Larry Scheiderer (part-time), M.A., *Central Michigan U.*; William Sells (part-time), M.S.Ed., *Ohio U.*; Charles Vosler (part-time), M.A.Ed., *Balt State U.*

HEARING AND SPEECH SCIENCES

Prof: Donald Fucci, Ph.D., *Purdue U.*; Richard Ham, Ph.D., *Purdue U.*

Assoc. Prof: Zinny Bond, Ph.D., *Ohio State U.*; Dean Christopher, Ph.D., *Ohio State U.*; Joann Fokes, Ph.D., *Purdue U.*; Norman Garber, Ph.D., *U. of Missouri*; Ronald Isele, M.A., *Kent State U.*; William Seaton, (director), Ph.D., *U. of Illinois*

Asst. Prof: Emily Buckberry, M.A., *Ohio U.*; Helen Conover, M.A., *Ohio U.*; Richard Dean, Ph.D., *Stanford U.*

Instr: Joan Fucci (part-time), M.A., *U. of Pittsburgh*; William Walence, M.A., *Kent State U.*

HISTORY

Dist. Prof: Carl Gustavson, Ph.D., *Cornell U.*

Prof: Charles Alexander, Ph.D., *U. of Texas*; Alan Booth, Ph.D., *Boston U.*; Robert Daniel, Ph.D., *U. of Wisconsin-Madison*; John Gaddis, Ph.D., *U. of Texas*; Alonzo Hamby, Ph.D., *U. of Missouri*; William Kaldis, Ph.D., *U. of Wisconsin-Madison*; George Lobdell, Ph.D., *U. of Illinois*; Suzanne Miers, Ph.D., *U. of London*; Compton Reeves (chairman), Ph.D., *Emory U.*; Donald Richter, Ph.D., *U. of Maryland*; Bruce Steiner, Ph.D., *U. of Virginia*

Assoc. Prof: Douglas Baxter, Ph.D., *U. of Minnesota*; Phillip Bebb, Ph.D., *Ohio State U.*; James Chastain, Ph.D., *U. of Oklahoma*; Gifford Doxsee, Ph.D., *Harvard U.*; Phyllis Field, Ph.D., *Cornell U.*; Marvin Fletcher, Ph.D., *U. of Wisconsin-Madison*; Richard Harvey, Ph.D., *U. of Missouri*; Donald Jordan, Ph.D., *U. of Wisconsin-Madison*; Lyle McGeoch, Ph.D., *U. of Pennsylvania*; Roy Rauschenberg, Ph.D., *U. of Illinois*; Robert Whealey, Ph.D., *U. of Michigan*

Asst. Prof: William Frederick, Ph.D., *U. of Hawaii*

HOME ECONOMICS

Prof: Shirley Slater (director), Ph.D., *Ohio State U.*

Assoc. Prof: Margaret King, Ed.D., *U. of Mass.*; Julia Nehls, M.S., *Ohio U.*; Ernest Stricklin, Ph.D., *Boston U.*; Betty Jo Sullivan, Ph.D., *Ohio State U.*

Asst. Prof: Lee Cibrowski, M.S., *Ohio U.*; Erma Langford, M.S., *U. of Tennessee*; Judy Matthews, M.S., *U. of Tennessee*; Prisca Mugwira, Ph.D., *U. of Tennessee*; June Varner, M.S., *Ohio U.*; Joan Yuhás, Ph.D., *U. of N. Carolina-Greensboro*

Instr: Diana Chew, M.S., *Eastern Mich. U.*; Tracy Gainer, M.S., *West Virginia U.*; Janet Izard, M.S., *U. of Illinois-Urbana*

INDUSTRIAL TECHNOLOGY

Prof: William Creighton, Jr., M.Ed., *U. of Cincinnati*; Menno DiLiberto (chairman), Ed.D., *U. of Illinois*; Robert Hawlk, Ed.D., *Penn State U.*; Thomas Sarchet (part-time), M.S., *Bradley U.*; Albert Squibb, D.Ed., *Penn State U.*

Assoc. Prof: Richard Nostrand, M.S.Ed., *SUNY College-Buffalo*; Arlen Saunders, M.A., *Morehead State U.*

Asst. Prof: John Adams (part-time), M.S., *Newark State College*; Curtis M. Johnson (part-time), M.A., *St. Thomas College*; William Reeves, M.A., *Western Kentucky U.*

INTERPERSONAL COMMUNICATION

Prof: Paul Nelson (dean), Ph.D., *U. of Minnesota*; Lynn Phelps, (director), Ph.D., *U. of Southern California*; John Timmis, III, Ph.D., *Penn State U.*; Richard Whitman, Ph.D., *U. of Nebraska*

Assoc. Prof: Charles Carlson, M.Ed., *Kent State U.*; Sue DeWine, Ph.D., *Indiana U.*; Ted Foster, Ph.D., *Ohio U.*; Judy Pearson, Ph.D., *Indiana U.*

Asst. Prof: David Descutner, Ph.D., *U. of Illinois*; Maung Gyi, Ph.D., *Ohio U.*; Anita James, Ph.D., *U. of Southern California*; Michael Smilowitz, M.A., *California State U.*; Ray Wagner, Ph.D., *Ohio U.*
Emeritus Prof: Paul Boase, Ph.D., *U. of Wisconsin*

JOURNALISM

Dist. Prof: Guido Stempel, III, Ph.D., *U. of Wisconsin*
Prof: James Alsbrook, Ph.D., *U. of Iowa*; Cortland Anderson, B.A., *Florida Southern College*; Russell Baird, M.A., *U. of Wisconsin*; Robert Baker, B.A., *U. of Maryland*; J.W. Click, Ph.D., *Ohio State U.*; Hugh Culbertson, Ph.D., *Michigan State U.*; Norman Dohn, Ph.D., *Ohio State U.*; Ralph Izard, Ph.D., *U. of Illinois*; Ralph Kliesch, Ph.D., *U. of Minnesota*; Charles L. Scott, M.S.J., *Ohio U.*; Arthur Turnbull, M.S., *Ohio U.*; John Wilhelm, B.A., *U. of Minnesota*
Assoc. Prof: Dru Evarts, Ph.D., *Ohio U.*; Sandra Haggerty, B.S., *Utah State U.*; Melvin Helitzer, B.A., *Syracuse U., New York*; Donald Lambert, M.A., *Penn State U.*; Thomas Peters, M.B.A., *Ohio U.*; Byron Scott, M.A., *U. of Miami*; Kae Don Shoultz, B.S., *Indiana University*
Asst. Prof: Thomas Hodges, M.S., *South Dakota State*; James Kropp, M.A., *University of Florida*; Cheryl Moore, *Ohio State Univ.*; Robert J. Richardson, M.S., *Ohio U.*

Instr: Herbert Amey (part-time), B.S.J.; Paul Bestgen (part-time), M.S.Ed., *Ohio U.*; Thomas Dunlap (part-time), M.S., *Ohio U.*; Ellen Gerl (part-time), M.S.J., *Ohio U.*; Thomas Hodson (part-time), J.D., *Ohio State U.*; Karl Runser (part-time), B.A., *Ohio U.*; Marjorie Stright (part-time); Sally Walters (part-time), M.S., *Ohio U.*

LINGUISTICS

Assoc. Prof: James Coady (chairman), Ph.D., *Indiana U.*; Gilbert Schneider, Ph.D., *Hartford Sem. Found.*; Marmo Soemarmo, Ph.D., *U. of California, Los Angeles*
Asst. Prof: Beverly Flanigan, Ph.D., *Indiana U.*; Richard McGinn, Ph.D., *U. of Hawaii*; Ruth Nybakken, Ph.D., *Columbia U.*; Adelaide Parsons, Ph.D., *U. of Michigan*

MANAGEMENT SYSTEMS

Prof: James Lee, D.B.A., *Harvard U.*; Arthur Marinelli (chairman), J.D., *Ohio State U.*; S. Benjamin Prasad, Ph.D., *U. of Wisconsin at Madison*; Lucian Spataro, Ph.D., *U. of Illinois*; John Stinson, Ph.D., *Ohio State U.*; Lane Tracy, D.B.A., *U. of Washington*
Assoc. Prof: Thomas Bolland, Ph.D., *U. of Chicago*; William Day, D.B.A., *Harvard U.*; Manjulika Koshal, Ph.D., *Patna U.*; Harvey Tschirgi, Ph.D., *U. of California, Los Angeles*
Asst. Prof: Promod K. Chandok, Ph.D., *Iowa State U.*; Christina Christenson, Ph.D., *Georgia State U.*; Ellsworth Holden, M.A., *Harvard U.*; Peri Iz, Ph.D. expected, *Ohio State U.*; Mary Keifer, J.D., *U. of Virginia*; Betty J. Licata, Ph.D., *Rensselaer Polytechnic Institute*; Anne H. McClanahan, Ph.D., *Ohio U.*; Sasan Rahmatian, Ph.D., *U. of Pennsylvania*; R. Daniel Reid, Ph.D. expected, *Ohio State U.*; Michael Roberson, Ph.D. expected, *U. of Tennessee*; Alice Rutkoskie, M.S., *Indiana U.*; Edward B. Yost, Ph.D. expected, *Ohio State U.*
Instr: Carolyn Murphree (part-time), M.A., *Columbia U.*; Virginia Woolley (part-time) *U. of Wisconsin at Madison*
Lect: Frank Barone, Ph.D., *Ohio State U.*; James Perotti, Ph.D., *Duquesne U.*
Emeritus Prof: Scott Walton, Ph.D., *Iowa State U.*

MARKETING

Prof: Kahandas Nandola (chairman), Ph.D., *U. of Pennsylvania*
Assoc. Prof: Osman A. Atac, Ph.D., *U. of North Carolina at Chapel Hill*; Robert Cook, D.B.A., *Kent State U.*
Asst. Prof: Ashok Gupta, Ph.D. expected, *Syracuse U.*; Timothy P. Hartman, Ph.D., *Ohio U.*; Daniel Lindley, Ph.D., *U. of North Carolina at Chapel Hill*
Emeritus Prof: David Richmond, Ph.D., *U. of Illinois*

MATHEMATICS

Prof: Robert Atalla, Ph.D., *U. of Rochester*; Robert Blair, Ph.D., *U. of Iowa*; Robert Butner, Ph.D., *U. of Iowa*; Carl H. Denbow, Ph.D., *U. of Chicago*; Surender Jain, *U. of Delhi*; Samuel Jasper, Ph.D., *U. of Kentucky*; Donald Norris (chairman), Ph.D., *Ohio State U.*; George M. Reed, Ph.D., *Auburn U.*; Paul Reichelderfer, Ph.D., *Ohio*

State U.; Hari Shankar, M.A., *U. of Cincinnati*; Larry Snyder, Ph.D., *Purdue U.*; Ray Spring, Ph.D., *U. of Illinois*; Shih-Liang Wen, Ph.D., *Purdue U.*; Howard Wicke, Ph.D., *U. of Iowa*; John Worrell, Jr., Ph.D., *U. of Texas*

Assoc. Prof: Ellery Golos, M.A., *U. of Michigan*; David Keck, Ph.D., *Ohio State U.*; Paul Malcom, Ph.D., *Ohio State U.*; Cyrus Mehr, Ph.D., *Purdue U.*; M.S.K. Sastry, Ph.D., *U. of Rochester*; James Shirey, Ph.D., *Purdue U.*

Asst. Prof: Eliot Jacobson, Ph.D., *U. of Arizona*; Wm. E. Kaufman, Ph.D., *U. of Houston*; Robert Vancko, Ph.D., *Pennsylvania State U.*; Thomas Wolf, Ph.D., *U. of Wisconsin*

Emeritus Prof: Robert Helsel, Ph.D., *Ohio State U.*

MILITARY SCIENCE

Prof: Richard J. Mottl, M.S.I.A., *George Washington University*
Asst. Prof: Paul A. Watkins, M.S., *U. of Southern Calif.*; Joseph R. Spafford, M.S., *Florida Institute of Technology*; John F. Eckert II, B.S., *William Carey College*; Gary C. Ritter, M.E., *U. of Texas*

MODERN LANGUAGES

Prof: Wallace Cameron, Ph.D., *U. of Iowa*; Richard Danner, Ph.D., *Indiana U.*; Philip Flum, Ph.D., *U. of North Carolina, Chapel Hill*; Thomas Franz, Ph.D., *U. of Kansas*; Lawrence LaJohn, Ph.D., *Indiana U.*; Ursula Lawson, Ph.D., *Vanderbilt U.*; Manuel Serna-Maytorena, Ph.D., *U. of Missouri*; Barry Thomas (chairman), Ph.D., *U. of California, Berkeley*; William Wrage, Ph.D., *U. of Wisconsin-Madison*

Assoc. Prof: Noel Barstad, Ph.D., *U. of Minnesota*; Carl Carrier, Ph.D., *Indiana U.*; Abelardo Moncayo-Andrade, Ph.D., *U. of Maryland*; Lois Vines, Ph.D., *Georgetown U.*; Marie-Claire Wrage, Ph.D., *U. of Wisconsin-Madison*

Asst. Prof: Grafton Conliffe, Ph.D., *Northwestern U.*; Ruth Nybakken, Ph.D., *Columbia U.*; Maureen Weissenrieder, Ph.D., *Penn State U.*

Instr: Joseph Burns, M.A., *U. of Tennessee*

Lect: Jacqueline Bolen, M.A., *Ohio U.*; Douglas Hinkle, M.A., *U. of Virginia*; Joseph Ipacs, M.A., *State U. of Szeged*; Bartolomeo Martello, M.A., *Michigan State U.*; Charles Richardson, M.A., *Ohio U.*; Henry Silver, M.A., *U. of California, Berkeley*

MUSIC

Prof: Howard Beebe, M.A., *Julliard School of Music*; William Brophy (part-time), M.M., *U. of Illinois*; P. Leighton Conkling, M.M., *Northwestern U.*; Reginald Fink, Ph.D., *U. of Oklahoma*; Sherwood Hall, Jr. (part-time), M.Mus., *Northwestern U.*; Joseph Henry, *U. of Rochester*; Eugene Jennings (part-time), D.M., *Florida State U.*; David Lewis, Ph.D., *West Virginia U.*; Robert Smith, M.M., *Cincinnati Conservatory of Music*; Margaret Stephenson, M.A., *Columbia U.*; Richard Syracuse, M.S., *Julliard School of Music*; Richard Wetzel, Ph.D., *U. of Pittsburgh*

Assoc. Prof: Ernest Bastin, M.M., *U. of Illinois*; Gail Berenson, M.M., *Northwestern U.*; Bert L. Damron, Ph.D., *Florida State University*; Lucile Jennings, M.A., *Ohio U.*; Guy Remonko, M.M., *West Virginia U.*; Harold Robison, M.A., *U. of Michigan*; James Scholten, Ed.D., *U. of Michigan*; Ronald Socciarelli, M.M., *U. of Michigan*; James Stewart, M.M., *Indiana U.*; Margene Stewart, M.A., *Ohio U.*; Eugene Wickstrom, S.M.M., *Union Theolo. Sem.*; Ira Zook, Jr., D.M.A., *U. of Michigan*

Asst. Prof: Kenneth Andrews, M.M., *Indiana U.*; Nancy Beebe, M.S., *Kent State U.*; James Chaudoir, Ph.D., *U. of Maryland*; Pauline Gagliano, M.S., *U. of Illinois*; Michael Kellogg, M.M., *Loyola U.*; Rebecca Kemper, M.M., *Indiana U.*; Leslie Kleen, Ph.D., *SUNY State U. Buffalo*; Edward Payne, M.M., *Cleveland Inst. of Music*; Claud Powell, Ph.D., *U. of Iowa*; Allyn Reilly, Ph.D., *Northwestern U.*

OHIO PROGRAM OF INTENSIVE ENGLISH

Assoc. Prof: Robert Dakin, Ph.D., *U. of Michigan*

Asst. Prof: Adelaide Heyde Parsons, Ph.D., *U. of Michigan*

Instr: Fonda Fry, M.A., *Ohio U.*

Lect: Linn Forhan, M.A., *Ohio U.*; Philip Hubbard, Ph.D., *UCSD*; Jack Humbles, M.A., *Ball State U.*; Mary Kaye Jordan, M.A., *Ohio U.*; Charles Mickelson, M.A., *Ohio U.*; Harry Neff, M.A., *American U.*; Cairo; Sandra Nickel, M.A., *Ohio U.*; Cornelia Perdreau, M.A., *Ohio U.*

NURSING

Prof: Hilda Richards, Ed.D., *Columbia U.*

Assoc. Prof: Audrey Koertvelyessy, M.S., *SUNY College, Buffalo*; Martha Raile (director), Ph.D., *New York U.*; Margaret Wyatt, Ph.D., *Ohio U.*

Asst. Prof: Jeanne Barton Jacoby, M.S.N., *Medical College of Georgia*; Emily Harman, M.Ed., *West Virginia U.*; Carla Phillips, M.S.N., *Ohio State U.*; Shirley Sennhauser, M.S.N., *Boston U.*

COLLEGE OF OSTEOPATHIC MEDICINE

Basic Sciences

Prof: Fredrick Hagerman, Ph.D., *Ohio State University*; Michael Patterson, Ph.D., *U. of Iowa*; Wesley Peterson, Ph.D., *U. of Pennsylvania*

Assoc. Prof: Charles Atkins, Ph.D., *North Carolina State U.*; John Blazyk, Ph.D., *Brown U.*; Joseph T. Eastman, Ph.D., *U. of Minnesota*; Louise Edds, Ph.D., *Brown U.*; Oscar Heck, Ph.D., *Washington State U.*; John Howell, Ph.D., *U. of California-Los Angeles*; Peter Johnson, Ph.D., *U. of Birmingham*; Joseph Jollick, Ph.D., *West Virginia U.*; Shahzad Mufti, Ph.D., *Case Western Reserve U.*; Ronald Portanova, Ph.D., *Case Western Reserve U.*; Thomas Wagner, Ph.D., *Northwestern U.*; Richard Walker, Ph.D., *U. of California*

Asst. Prof: Huzoor Akbar, Ph.D., *Australian National U.*; William Blue, Ph.D., *Loyola U.*; Walter Costello, Ph.D., *Boston U.*; Ralph A. DiCaprio, Ph.D., *University of Alberta*; Gary Dudley, Ph.D., *Ohio State U.*; Gerhard Ehrenspeck, Ph.D., *Pennsylvania State U.*; Duane Foley, Ph.D., *U. of California*; Kenneth Goodrum, Ph.D., *U. of Texas*; Donald V. Greenlee, Ph.D., *U. of California*; Malcolm C. Modrzakowski, Ph.D., *U. of Georgia*; Scott Michael Moody, Ph.D., *U. of Michigan*; Ellengene Peterson, Ph.D., *U. of California-Riverside*; Rebecca Riales (visiting), Ph.D., *Ohio State U.*; Michael Rowe, Ph.D., *U. of California-Riverside*; Sharon Simpson, Ph.D., *U. of Illinois*; Leon C. Wince, Ph.D., *West Virginia U.*; John M. Zook, Ph.D., *Duke U.*

Instr: William Haviland, M.S., *Ohio U.*

Lect: Janice Gault, M.S., *Ohio U.*

Department of Family Medicine

Prof: Anthony G. Chila, D.O., *Kansas City College of Osteopathic Medicine*; Frank W. Myers, D.O., *College of Osteopathic Medicine & Surgery, Des Moines*; David A. Patriquin, D.O., *Philadelphia College of Osteopathic Medicine*

Assoc. Prof: Helen Hicks Baker, Ph.D., *Univ. of North Carolina, Chapel Hill*; David E. Brown, D.O., *Kansas City College of Osteopathic Medicine*; Charles J. Cannon, D.O., *Philadelphia College of Osteopathic Medicine*; Peter B. Dane, D.O., *Michigan State University College of Osteopathic Medicine*; Arden L. Findlay, D.O., *College of Osteopathic Medicine & Surgery, Des Moines*; Daniel J. Marazon, D.O., *Kirkville College of Osteopathic Medicine*; Lewis J. Miller, D.O., *Kirkville College of Osteopathic Medicine*; Anthony J. Tenoglia, D.O., *Kansas City College of Osteopathic Medicine*; Thomas A. Thesing, D.O., *College of Osteopathic Medicine & Surgery, Des Moines*

Asst. Prof: Dennis Baker, Ph.D., *Univ. of Florida*; John A. Brose, D.O., *Texas College of Osteopathic Medicine*; William F. Duerfeldt, D.O., *Kirkville College of Osteopathic Medicine*; Stephen A. Klein, D.O., *Kirkville College of Osteopathic Medicine*; Marjorie E. Nelson, M.D., *Indiana University*; Christopher D. Olson, D.O., *College of Osteopathic Medicine & Surgery, Des Moines*; Lenard G. Presutti, D.O., *College of Osteopathic Medicine & Surgery, Des Moines*; Edward W. Schreck, D.O., *Chicago College of Osteopathic Medicine*; Robert G. Stockmal, D.O., *Philadelphia College of Osteopathic Medicine*; Harold C. Thompson, D.O., *Chicago College of Osteopathic Medicine*; John C. Wolf, D.O., *Kirkville College of Osteopathic Medicine*

Department of Osteopathic Medicine

Prof: Fred Jensen, D.O., *Chicago College of Osteopathic Medicine*; J. Phillip Jones, D.O., *Kansas City College of Osteopathy & Surgery*; John W. Knable, D.O., *College of Osteopathic Medicine & Surgery, Des Moines*; Charles Knouse, D.O., *Kansas City College of Osteopathic Medicine*; Thomas H. Lippold, D.O., *College of Osteopathic Medicine & Surgery, Des Moines*; Frederick W. Rente, D.O., *Philadelphia College of Osteopathic Medicine*; J. Langdon Taylor, Ph.D., *University of California-Los Angeles*

Assoc. Prof: Jerome L. Axelrod, D.O., *Philadelphia College of Osteopathic Medicine*; Norman F. Baker, D.O., *Philadelphia College of Osteopathic Medicine*; Paul E. Cadamagnani, D.O., *Chicago College of Osteopathic Medicine*; Steven G. Carin, D.O., *Philadelphia College of Osteopathic Medicine*; Richard H. Feeck, D.O., *Philadelphia College of Osteopathic Medicine*; Constantine Makris, M.D., *U. Medical School, Athens, Greece*; John S. Molea, D.O., *College of Osteopathic Medicine & Surgery, Des Moines*; Lawrence W. Mysliwiec, D.O., *Michigan State University College of Osteopathic Medicine*; Harvey C. Orth, Jr., D.O., *Kirkville College of Osteopathic Medicine*

Asst. Prof: William H. Carlson, D.O., *Kirkville College of Osteopathic Medicine*; James E. Foglesong, D.O., *Kirkville College of Osteopathic Medicine*; W. Randolph Purdy, D.O., *Kirkville College of Osteopathic Medicine*

PHILOSOPHY

Prof: Gene Blocker, Ph.D., *U. of California-Berkeley*; Donald Borchert, Ph.D., *Princeton-Theology Sem.*; Richard Butrick, Ph.D., *Columbia U.*; Michael Corrado, Ph.D., *Brown U.*; Stanley Grean, Ph.D., *Columbia U.*; Charles Ping, Ph.D., *Duke U.*; Warren Ruchti (chairman), Ph.D., *U. of Pennsylvania*; David Stewart, Ph.D., *Rice U.*; Robert Wieman, Ph.D., *U. of California-Berkeley*

Assoc. Prof: Algis Mickunas, Ph.D., *Emory U.*; Elizabeth Smith, Ph.D., *U. of Washington*; Robert Trevas, Ph.D., *U. of Maryland*; George Weckman, Ph.D., *U. of Chicago*

Asst. Prof: James Perotti, Ph.D., *Duquesne U.*

Dist. Prof. Emeritus: Troy Organ (part-time), Ph.D., *U. of Iowa*

PHYSICS AND ASTRONOMY

Dist. Prof: Raymond Lane, Ph.D., *Iowa State U.*; Jacobo Rapaport, Ph.D., *Mass Institute of Technology*

Prof: Jeremiah Barry, Ph.D., *Catholic U. America*; Ernest Breitenberger, Ph.D., *U. of Cambridge*; Dr. Phil, *U. of Vienna*; Ronald Cappelletti, Ph.D., *U. of Illinois*; Charles Chen, Ph.D., *U. of Maryland*; James Dilley, Ph.D., *Syracuse U.*; Roger Finlay, Ph.D., *Johns Hopkins U.*; Steven M. Grimes, Ph.D., *U. of Wisconsin, Madison*; Earle Hunt, Ph.D., *Rutgers State U.*; Richard Koshel, Ph.D., *U. of Kansas*; David Onley, D. Phil., *Oxford U.*; Roger Rollins, Ph.D., *Cornell U.*; Edward Sanford (chairman), Ph.D., *Iowa State U.*; Folden Stumpf, Ph.D., *Illinois Inst. of Tech.*; Tomoyasu Tanaka, Ph.D., *Kyusyu Imperial U.*; Louis Wright, Ph.D., *Duke U.*

Assoc. Prof: Charles Briant, Ph.D., *U. of Texas*; Darrell Huwe, Ph.D., *U. of Calif., Berkeley*; Seung Yun, Ph.D., *Brown U.*

POLITICAL SCIENCE

Prof: Richard Bald, Ph.D., *U. of Michigan*; Ernest Collins, Ph.D., *U. of Kentucky*; William F. Dorrill, Ph.D., *Harvard U.*; Willard Elsbree, Ph.D., *Harvard U.*; Felix Gagliano, Ph.D., *U. of Illinois*; Raymond Gusteson, Ph.D., *Syracuse U.*; Joseph Tucker, Ph.D., *U. of Illinois*; Paul van der Veur, Ph.D., *Cornell U.*

Assoc. Prof: James Barnes, Ph.D., *Ohio State U.*; Edward Baum, Ph.D., *U. of California-Los Angeles*; David Dabelko, Ph.D., *U. of Illinois*; Harold Molineu (chairman), Ph.D., *American U.*; Alexander Prisle, Ph.D., *Brown U.*; Thomas Walker, Ph.D., *U. of New Mexico*; David Williams, Ph.D., *Columbia U.*; Richard Willis, Ph.D., *U. of Cincinnati*

Asst. Prof: James Henderson, Ph.D., *U. of Missouri*; Ronald Hunt, Ph.D., *Ohio State U.*; Joy Huntley, Ph.D., *Duke U.*; Sung Kim, Ph.D., *Columbia U.*; Patricia Richard, Ph.D., *Syracuse U.*; Mark Weinberg, Ph.D., *U. of North Carolina*

Instr: David Beals, Ph.D. candidate, *Ohio State U.*

PSYCHOLOGY

Dist. Prof: George Klare, Ph.D., *U. of Minnesota*; William Snyder, Ph.D., *Ohio State U.*

Prof: Jack Arbutnot, Ph.D., *Cornell U.*; Hal Arkes, Ph.D., *U. of Michigan*; Francis Bellezza, Ph.D., *U. of Minnesota*; Homer Bradshaw, Ph.D., *Ohio State U.*; James Bruning, Ph.D., *U. of Iowa*; Thomas Creer (chairman), Ph.D., *Florida State U.*; John Garske, Ph.D., *U. of California-Berkeley*; Kenneth Holroyd, Ph.D., *U. of Miami*; Harry Kotses, Ph.D., *Michigan State U.*; Svenn Lindsfold, Ph.D., *U. of Miami*; John McNamara, Ph.D., *U. of Georgia*; Michael Patterson, Ph.D., *U. of Iowa*; Gaige Paulsen (part-time), Ph.D., *U. of Minnesota*

ta; David Russell, Ph.D., *U. of Minnesota*; Gary Schumacher, Ph.D., *Iowa State U.*; Lawrence Waters, Ph.D., *Ohio State U.*

Assoc. Prof: Margret Appel, Ph.D., *U. of Denver*; Jean Drenvestedt, Ph.D., *Vanderbilt U.*; John Feallock, Ph.D., *U. of Virginia*; Donald Gordon, Ph.D., *U. of Alabama*; Michael Haneck (part-time), Ph.D., *Penn State U.*; David Johnson, Ph.D., *Ohio State U.*; Paul Lewis, Ph.D., *Bowling Green State U.*; Steven Lynn, Ph.D., *U. of Indiana*; Jerome Maurath (part-time), Ph.D., *U. of Illinois*; Danny Moates, Ph.D., *Vanderbilt U.*

Asst. Prof: Patricia Beamish (part-time), Ed.D., *West Virginia University*; Joe Gay (adjunct), Ph.D., *U. of Houston*; Paul Gleason (part-time), Ph.D., *Penn State U.*; Jeanne Heaton (part-time), Ph.D., *Ohio U.*; Gerard Jacobs, Ph.D., *U. of South Florida*; David Malawista (adjunct), M.S., *Ohio U.*; David Moody (adjunct), *U. of Oregon*; Alan O'Leary (adjunct), Ph.D., *Ohio U.*; Paula Popovich, Ph.D., *Michigan State U.*; Irma Rapaport (adjunct), Ph.D., *Ohio U.*; Paul Sanberg, Ph.D., *Australian National U.*; Gary Sarver, Ph.D., *U. of Florida*

Instr: James Short (part-time), M.A., *Ohio U.*; June Snyder (part-time), M.A., *Ohio State U.*

SOCIAL WORK

Assoc. Prof: Miriam Clubok, M.S.W., *Wayne State U.*; Thomas Oellerich (chairman), Ph.D., *Case Western Reserve*

Asst. Prof: Patricia Baasel, Ph.D., *Ohio U.*

Instr: Mary Jo Blazek, M.S.W., *St. Louis U.*

Lect: Umesh Bhardwaj, M.S.W., *U. of Delhi, India*

SOCIOLOGY AND ANTHROPOLOGY

Prof: Rodney Elliott, Ph.D., *U. of Colorado*; Orville Gurslin, Ph.D., *SUNY Buffalo*; William Harlan, Ph.D., *U. of Chicago*; Arthur Saxe, Ph.D., *U. of Michigan*; Eric Wagner, Ph.D., *U. of Florida*; William Wood, Ph.D., *U. of North Carolina Chapel Hill*

Assoc. Prof: Bruce Ergood, Ph.D., *U. of Florida*; Tibor Koertvelyessy, Ph.D., *SUNY Buffalo*; Girard Krebs, Ph.D., *Cornell U.*; Bruce Kuhre, Ph.D., *Penn State U.*; Don Shamblin, Ph.D., *SUNY Buffalo*; Robert Sheak, Ph.D., *Washington U.*; Robert Shelly (chairman), Ph.D., *Michigan State U.*; David Sutherland, Ph.D., *U. of Kansas*; Alex Thio, Ph.D., *SUNY Buffalo*

Asst. Prof: Christa Bausch, Ph.D., *U. of Tuebingen*; William Burkhardt, Ph.D., *Wayne State U.*; Susan Rodgers, Ph.D., *U. of Chicago*

TELECOMMUNICATIONS

Prof: Archie Greer, M.F.A., *Ohio U.*; Drew McDaniel (director), Ph.D., *Ohio U.*; William Miller, Ph.D., *U. of Southern California*; Roderick Rightmire, Ph.D., *Michigan State U.*

Assoc. Prof: Joseph Berman, Ph.D., *Ohio U.*; Ron Black, M.A., *U. of Michigan*; Charles Clift, III, Ph.D., *Indiana U.*; Karin Sandell, Ph.D., *U. of Iowa*; Arthur Savage, Jr., Ph.D., *Michigan State U.*

Asst. Prof: Jeri Cabot, Ph.D., *Duke U.*; Cheryl Moore, M.A., *Ohio State U.*

Instr: George Korn, M.A., *Southern Illinois U.*; David Mould, M.A., *U. of Kansas*

THEATER

Prof: Alvin Kaufman, Ph.D., *Stanford U.*; Robin Lacy, Ph.D., *U. of Denver*; Peter Sander, M.F.A., *Carnegie-Mellon U.*; George Sherman, M.F.A., *Yale U.*; Robert L. Winters (director), M.A., *Michigan State U.*

Assoc. Prof: Dennis Dalen, M.A., *U. of Kansas*; Lonny Frazee, M.A., *Penn State U.*; Seabury Quinn, Jr., Ph.D., *Yale U.*

Asst. Prof: Laura Davidian-Parrotti, M.F.A., *Northern Michigan U.*; Denise Gabriel-Murray, M.A., *Ohio State U.*; Robert St. Lawrence, M.S., *U. of Pittsburgh*

Instr: Richard Fox, M.A., *Montclair State College*; Tom T. Skore, M.F.A., *Florida State Univ.*; Timothy Carryer, B.A., *Reed College*

ZOOLOGICAL AND BIOMEDICAL SCIENCES

Prof: Ronald Downey, Ph.D., *U. of Nebraska*; Fredrick Hagerman (chairman), Ph.D., *Ohio State U.*; Robert Hikida, Ph.D., *U. of Illinois*; William Hummon, Ph.D., *U. of Mass. Amherst*; James Lawrence, Ph.D., *Ohio State U.*; Siegfried Maier, Ph.D., *Ohio State U.*; John McQuate, Ph.D., *Indiana U.*; Wesley Peterson, Ph.D., *U. of Pennsylvania*; William Romoser, Ph.D., *Ohio State U.*; Jerome Rov-

ner, Ph.D., *U. of Maryland*; Henri Seibert, Ph.D., *U. of Illinois*; Gerald Svendsen, Ph.D., *U. of Kansas*; Weldon Witters, Ph.D., *Purdue U.*

Assoc. Prof: Charles Atkins, Ph.D., *NC State U.*; Joseph Eastman, Ph.D., *U. of Minnesota*; Louise Edds, Ph.D., *Brown U.*; Oscar Heck, Ph.D., *Washington State U.*; John Howell, Ph.D., *U.C.L.A.*; Joseph Jollick, Ph.D., *West Virginia U.*; Patricia Jones-Witters, Ph.D., *Purdue U.*; Shahzad Mufti, Ph.D., *Case Western Res.*; Ronald Portanova, Ph.D., *Case Western Reserve U.*; Richard Walker, Ph.D., *U. of Calif. Berkeley*; James Wilson, Ph.D., *U. of Michigan*

Asst. Prof: Huzoor Akbar, Ph.D., *Australian National University*; William Blue, Ph.D., *Loyola U.*; Walter Costello, Ph.D., *Boston U.*; Ralph DiCaprio, Ph.D., *U. of Alberta, Edmonton*; Gary Dudley, Ph.D., *Ohio State U.*; Gerhard Ehrensbeck, Ph.D., *Penn State U.*; Duane Foley, Ph.D., *U. of Calif. Davis*; Kenneth Goodrum, Ph.D., *U. of Texas at Austin*; Malcolm Modrzakowski, Ph.D., *U. of Georgia*; Scott Moody, Ph.D., *U. of Michigan*; Ellengene Peterson, Ph.D., *U. of Calif. Riverside*; Michael Rowe, Ph.D., *U. of Calif. Riverside*; Sharon Simpson, Ph.D., *Univ. of Illinois*; Leon Wince, Ph.D., *West Virginia U.*; Morgantown; John Zook, Ph.D., *Duke U.*

Lect: Bernadine Allen, M.A., *U. of Michigan*; Janice Gault, M.S., *Ohio U.*

BELMONT COUNTY CAMPUS

Assoc. Prof: John Bisocchi (chemistry), M.A. *Bowling Green State U.*; Lawrence Bush (mathematics), M.S., *Ohio U.*; Claude Colvin (English), M.A., *Kent State U.*; Gifford Frazee (economics), M.S., *West Virginia U.*; Adam Giandomenico (hearing and speech sciences), Ph.D., *Case Western Reserve U.*; Thomas Helms (education), Ph.D., *Ohio U.*; James Kettler (physics), Ph.D., *West Virginia U.*; Michael Mormanis (physical education), M.A., *West Virginia U.*; James W. Newton, (geography and urban planning), Ph.D., *University of North Carolina*

Asst. Prof: Eldred Bovenizer (education), Ph.D., *Ohio U.*; Thomas P. Flynn (English), Ph.D., *Ohio U.*; Kay Mansuetto (botany), M.S., *U. of North Carolina*; Michael McTeague (history), M.A., *Ohio U.*; David Miles (comparative arts), *Northeast Missouri State College*; Paul Mingyar (zoology), M.A., *West Virginia U.*; Victor Rutter (history), M.A., *Ohio U.*; Thomas Stubbs (mathematics), M.A., *West Virginia U.*; Samuel Weaver (history), Ph.D., *American U.*; Henry Winkler (psychology), Ph.D., *Ohio U.*; Howard Wisch (philosophy), M.A., *City U. of New York*

Instr: Daniel Stern (sociology, part-time), M.A., *U. of Pittsburgh*

Lect: Kenneth Poulton (accounting), M.S., *U. of Colorado*

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Asst. Prof: Gary Elkin (law enforcement technology), M.S., *Eastern Kentucky University*; David Gigley (general secretarial technology), M.Ed., *University of Cincinnati*; Veena Kasbekar (English), Ph.D., *U. of Cincinnati*; Richard Kowieski (interpersonal communication), Ph.D., *Ohio University*; Richard Ohman (art), M.F.A., *Ohio University*; Donald Saunders (history), M.A., *University of Colorado*; Patricia Scott (comparative arts), Ph.D., *Ohio University*; Arun Venkatachar (physics), Ph.D., *North Texas State University*; Richard Whinery (human services technology), M.A., *University of Akron*

Instr: Herbert Cummins (business management technology), M.B.A., *Ohio University*; Richard M. Sandy (mathematics), M.S., *Michigan State University*; Hamid Shahrestani (economics), M.A., *Western Michigan University*; Ruth Zajdel (general secretarial technology), B.S., *Morehead State University*

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Lyons (physical education), M.Ed., *Ohio U.*; David D. Mowry (zoology), M.Ed., *Ohio U.*; Gene Stoppenhagen (physics), Ph.D., *Ohio U.*; Jeffery Wagner (theater) M.F.A., *Ohio U.*; Larry Wilson (chemistry), Ph.D., *Ohio State U.*; Joanne Wolford (library media technology), M.S., *Case Western Reserve U.*; Paul Yuckman (English), Ph.D., *Ohio U.*

Asst. Prof: Larry Ault (economics, part-time), M.A.; Andrea Baker (sociology), *Case Western Reserve U.*; Peter Desy (English), Ph.D., *Kent State U.*; James Fannin (history), Ph.D., *Ohio State U.*; John Faulkner (English), Ph.D., *Rutgers U.*; Gordon Groby (philosophy), M.A., *Ohio State U.*; Larry Kerr (psychology), Ph.D., *UCLA*; Gary LaFleur (communications), Ph.D., *U. of Massachusetts*; Susan Maxwell (secretarial technology), M.A., *U. of Kentucky*; Zale Maxwell (industrial technology), M.Ed., *Ohio U.*; Paul Nemetz (physical education), M.Ed., *Ohio U.*; Stephen Noltie (mathematics), Ph.D., *U. of California-Riverside*; Lorraine Ray (secretarial technology), M.Ed., *U. of Toledo*; William Stevens (electronics technology), M.B.A., *Ohio U.*; Clifford Stone (accounting technology), M.B.A., *Xavier U.*; Nancy Zane (English), Ph.D., *Ohio U.*

Instr: Shun Endo (art), M.F.A., *Temple U.*; Gary Lockwood (engineering), M.S., *Ohio State U.*

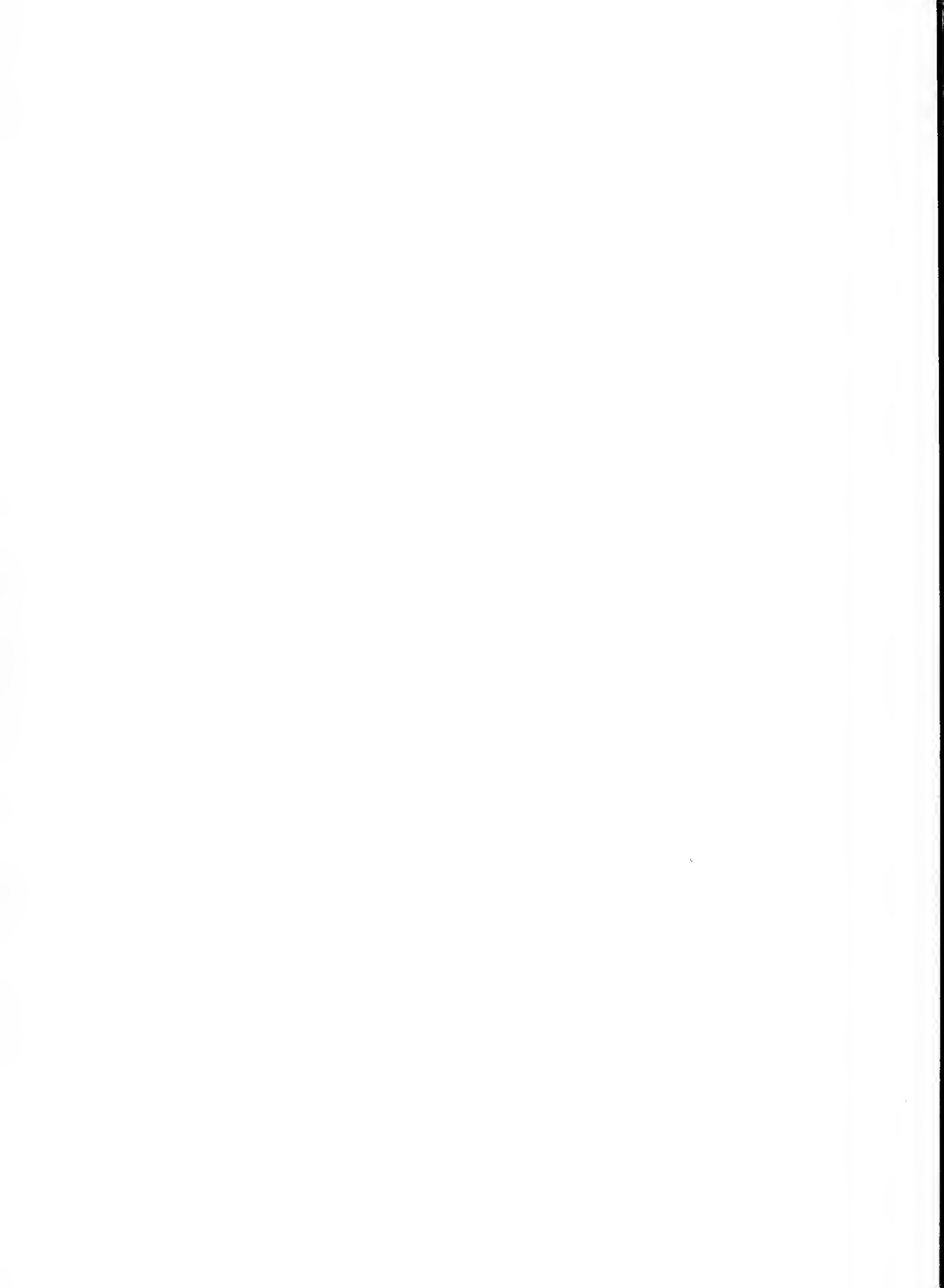
ZANESVILLE CAMPUS

Prof: John J. Arnold (philosophy), J.D., *Capital U. of Law*, Ph.D., *Hartford Seminary Foundation*

Assoc. Prof: John W. Benson (zoology), Ph.D., *Michigan State U.*; Melissa Bixler (physical education), M.S.Ed., *Ohio State U.*; Thomas L. Bixler (physical education), M.Ed., *Ohio U.*; George Brooks (zoology), Ed.D., *Ball State U.*; Richard J. Brumbaugh (chemistry), Ph.D., *Ohio U.*; Marcia Herman (music), M.F.A., *Ohio U.*; James E. Jordan (political science), Ph.D., *U. of Michigan*; John R. Kelbley (English), M.A., *Ohio U.*; Michael J. Kline (history), M.A., *Ohio U.*; Robert A. Rider (mathematics), M.A., *Bowling Green State U.*; Alice C. Tom (nursing), M.S., *Western Reserve U.*; George L. Ware, III (English), M.A., *Ohio U.*

Asst. Prof: Shirley A. Barr (nursing), M.S.N., *Ohio State U.*; Judith A. Davis (nursing), M.S., *Ohio State U.*; Mary E. Dwyer (fine arts), M.F.A., *Ohio U.*; Catherine A. Herron (nursing), M.S.N., *Ohio State U.*; James W. Hoefler (economics), M.A., *Ohio U.*; Linda L. Hunt (nursing), M.S., *Ohio State U.*; Craig D. Laubenthal (education), Ph.D., *Michigan State U.*; Barbara L. Schilling (nursing), M.S.N., *Ohio State U.*; Mark A. Shatz (psychology), Ph.D., *U. of Florida*; Louis W. Smith (mathematics), M.A., *Louisiana State U.*; Reed W. Smith (radio/tv), M.A., *Bowling Green State U.*; Parinbam K. Thamburaj (chemistry), Ph.D., *Kent State U.*; Russell L. White (history), M.A., *Ohio State U.*; Joan S. Woolf (nursing) M.A., *Ohio State U.*

Instr: Mary H. Baker (nursing), M.S.N., *Capital U.*; William E. Baker (nursing), B.S.N., *Kent State U.*; Rodney A. Nelson (radio/tv), M.A., *Kansas State U.*



Ohio University

Do not write in this space.		
Ap Fee _____		
Res.	M	PM

Application for Admission of U.S. Citizens to a Graduate Program

Please type or print with black ink

An APPLICATION FEE must accompany all applications. The fee for admission to a degree program is \$25; nondegree and transient admission is \$15; nondegree to degree status or to a second degree program is \$10. Mail application and fee to the Office of Graduate Student Services. Processing of your application will be delayed until the fee is received. Currency will not be accepted. Remit check or money order payable to OHIO UNIVERSITY. Your cancelled check or money order stub will be your receipt. **Application fee is nonreturnable.**

1. Name _____ Soc. Sec. No. _____
(LAST) (FIRST) (MIDDLE)

Important Notice: If transcript or documents might be received in our office with your name other than the one shown above, please indicate _____
(OTHER NAME)

2. Permanent address _____
(NUMBER) (STREET)

_____ 3. Telephone: _____
(CITY) (STATE) (ZIP) (AREA CODE) (NUMBER)

4. County (if Ohio) _____ Male _____ Female _____ Citizenship _____

5. Mailing address (if different from above) _____
(NUMBER) (STREET)

_____ (CITY) (STATE) (ZIP)

6. In which of the United States did you claim legal residence during the past 12 months? _____
State in U.S.

7. Indicate college or university from which you last graduated or expect to graduate, and degree you received or expect to receive:

_____ (NAME OF INSTITUTION) (CITY AND STATE) (MAJOR) (DEGREE) (DATE OF GRADUATION)

8. When do you wish to enter OHIO UNIVERSITY?

Winter Quarter	Spring Quarter	Summer Quarter	Fall Quarter
_____ January _____ <small>(YEAR)</small>	_____ March _____ <small>(YEAR)</small>	_____ First Term _____ _____ Second Term _____ <small>(YEAR)</small>	_____ September _____ <small>(YEAR)</small>

9. Indicate the Ohio University campus you wish to attend.

_____ Athens _____ Belmont _____ Chillicothe
(1)
 _____ Ironton _____ Lancaster _____ Zanesville _____ Other Ohio University Credit Center _____
(3) (4) (6) (9) (2)

10. What will be your graduate major? (Use the list of departments in the *Graduate Catalog*) _____

In what specific area of your major do you wish to specialize? _____

11. What degree will you work toward at OHIO UNIVERSITY? _____ Masters _____ Ph.D. _____ Part-time _____ Full-time

_____ Nondegree _____ Transient _____ Workshop (give title) _____

12. Selective Service No. (optional) _____ Will you be receiving veteran's benefits? _____ Yes _____ No

13. Date of birth _____ Place of birth _____
(MONTH) (DAY) (YEAR) (CITY) (STATE)

14. LIST ALL COLLEGES OR UNIVERSITIES ATTENDED (begin with the earliest attended):

Name of Institution	Location (city, state)	Dates attended	Major area of study	Degree earned
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

NOTE: The applicant must request that two separate transcripts from each school attended be sent directly to the Office of Graduate Student Services, Ohio University, Athens, Ohio 45701. Transcripts for Ohio University students seeking admission to a graduate program will be obtained directly by the Office of Graduate Student Services. **Transcripts should be sent at once!**

(See reverse side of page)

15. Are you presently an employee of Ohio University? _____ Full-time _____ Part-time _____
16. Current occupation _____ Date hired _____ City _____ State _____
17. Teaching or research experience (Describe position held, dates and location)

18. Nonacademic work experience. (Describe position held, dates and location)

19. Honors or scholarship recognition _____
20. Professional or vocational plans _____

Names and addresses of three persons whom you have requested to write letters or recommendation.
These letters must be mailed directly to the department in which you wish to be considered.

1. _____
2. _____
3. _____

You will be informed by the department to which you apply of any additional supporting materials required.

Living arrangements: After you are admitted to a graduate program, you will receive a housing contract. Any correspondence concerning housing should be directed to the Director of Housing, Chubb Hall, Ohio University, Athens, Ohio 45701.

Medical History: A report form will be sent to you in the future.

Application for Graduate Appointment

Complete only if you wish to apply for financial assistance

TYPE OF APPOINTMENT (check one or indicate preference by number)

1. ____ Graduate associate in _____
2. ____ Graduate staff associate in _____
3. ____ Graduate research associate in _____
4. ____ Graduate teaching associate in major field _____
5. ____ Tuition scholarship (must carry 15 graduate credit hours minimum)

Contact the department of your interest for further information on types of appointments available.

Ohio University complies with nondiscrimination laws
including Title VI of the Civil Rights Act and
Title IX of the Education Amendments of 1972.

Signature _____

Date of submitting application _____

Ohio University

Do not write in this space.		
Ap Fee _____		
Res.	M	PM

Application for Admission of U.S. Citizens to a Graduate Program

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(3) (4) (6) (9)
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 _____ Nondegree _____ Transient _____ Workshop (give title) _____

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13. Date of birth _____ Place of birth _____
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20. Professional or vocational plans _____

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including Title VI of the Civil Rights Act and
Title IX of the Education Amendments of 1972.

Signature _____

Date of submitting application _____

OHIO UNIVERSITY Athens, Ohio 45701

DEPARTMENT _____

The applicant fills in his or her name and department to which he or she is applying and gives this blank to a person able to give adequate appraisal of his or her qualifications for admission. Please check box if also applying for financial assistance.

☐ TA ☐ GA ☐ Federal Support ☐ Scholarship

So that the student as well as the academic department may benefit directly from your candid evaluation, you are encouraged, upon the student's request, to share the contents of this evaluation with the student. This procedure is in compliance with Ohio University policy and with the Family Educational Rights and Privacy Act of 1974.

I (student) request that this recommendation be:

_____ Confidential (open only to the Academic Department personnel)

_____ Open (I may review)

(STUDENT'S SIGNATURE)

_____ I agree

_____ I do not agree to the above designation.

(SIGNATURE OF PERSON PROVIDING RECOMMENDATION)

_____ has applied for admission to _____
_____. Will you please supplement the formal application with a statement which indicates the scholarly achievement, fitness for graduate study, personal qualities, character, and reliability of the applicant. Please state how extensively you are acquainted with the student and his or her work.

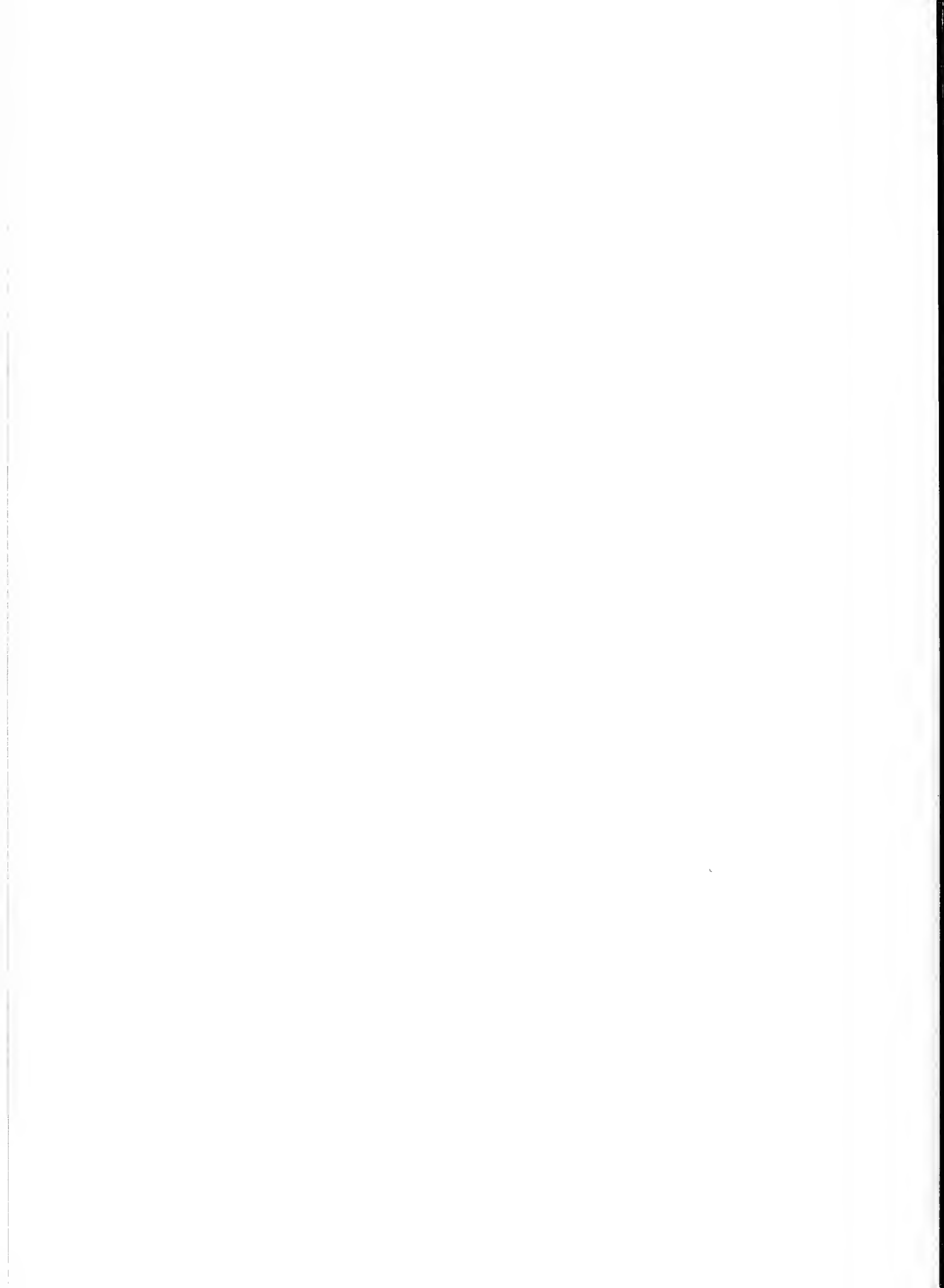
Please print name _____

Signed _____ Date _____

Position _____

Institution _____ Address _____

This form is to be mailed directly to the graduate chairman of the department of the applicant's interest, Ohio University, Athens, Ohio 45701. Your prompt response to this request will be appreciated.



OHIO UNIVERSITY Athens, Ohio 45701

DEPARTMENT _____

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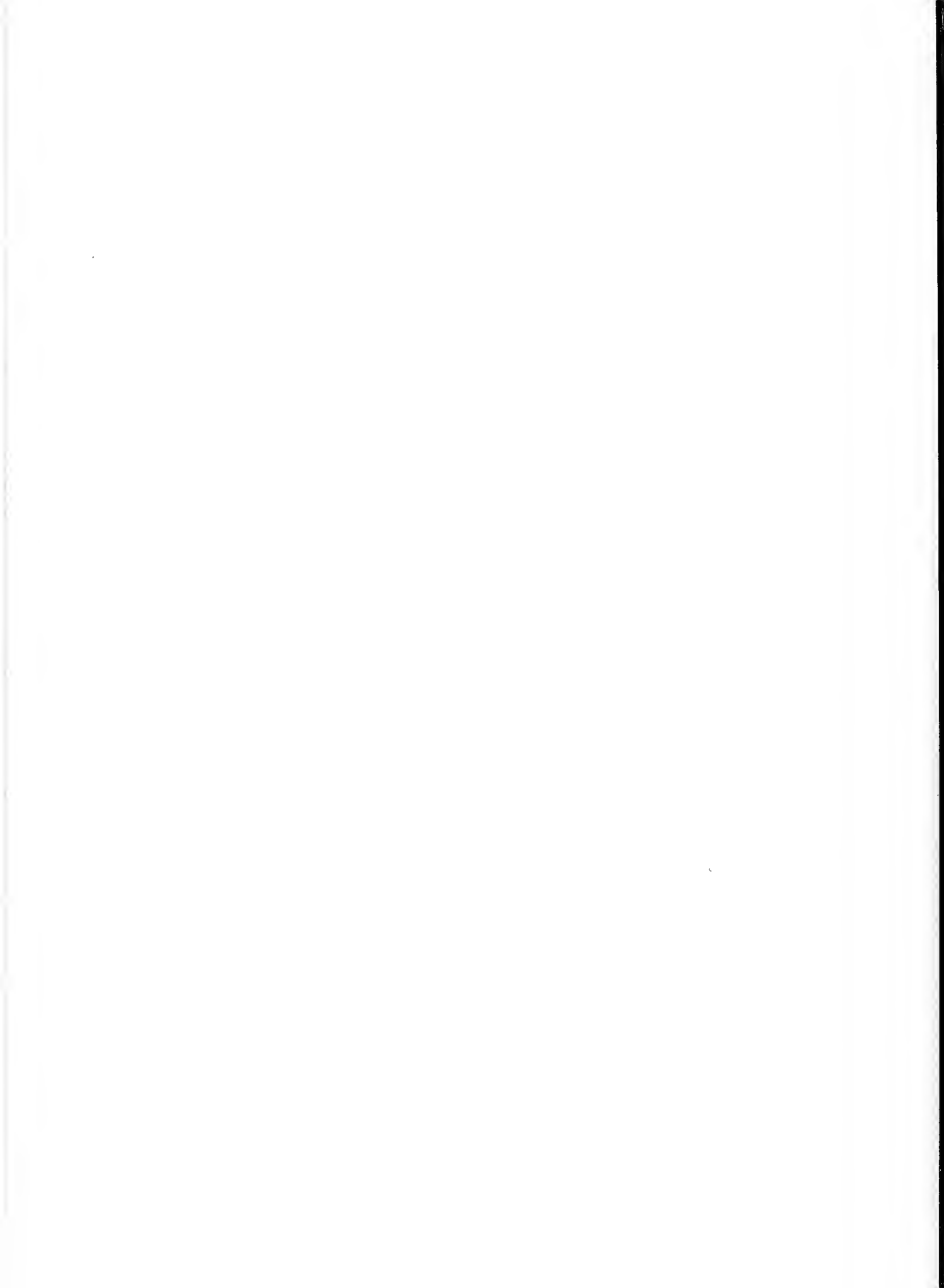
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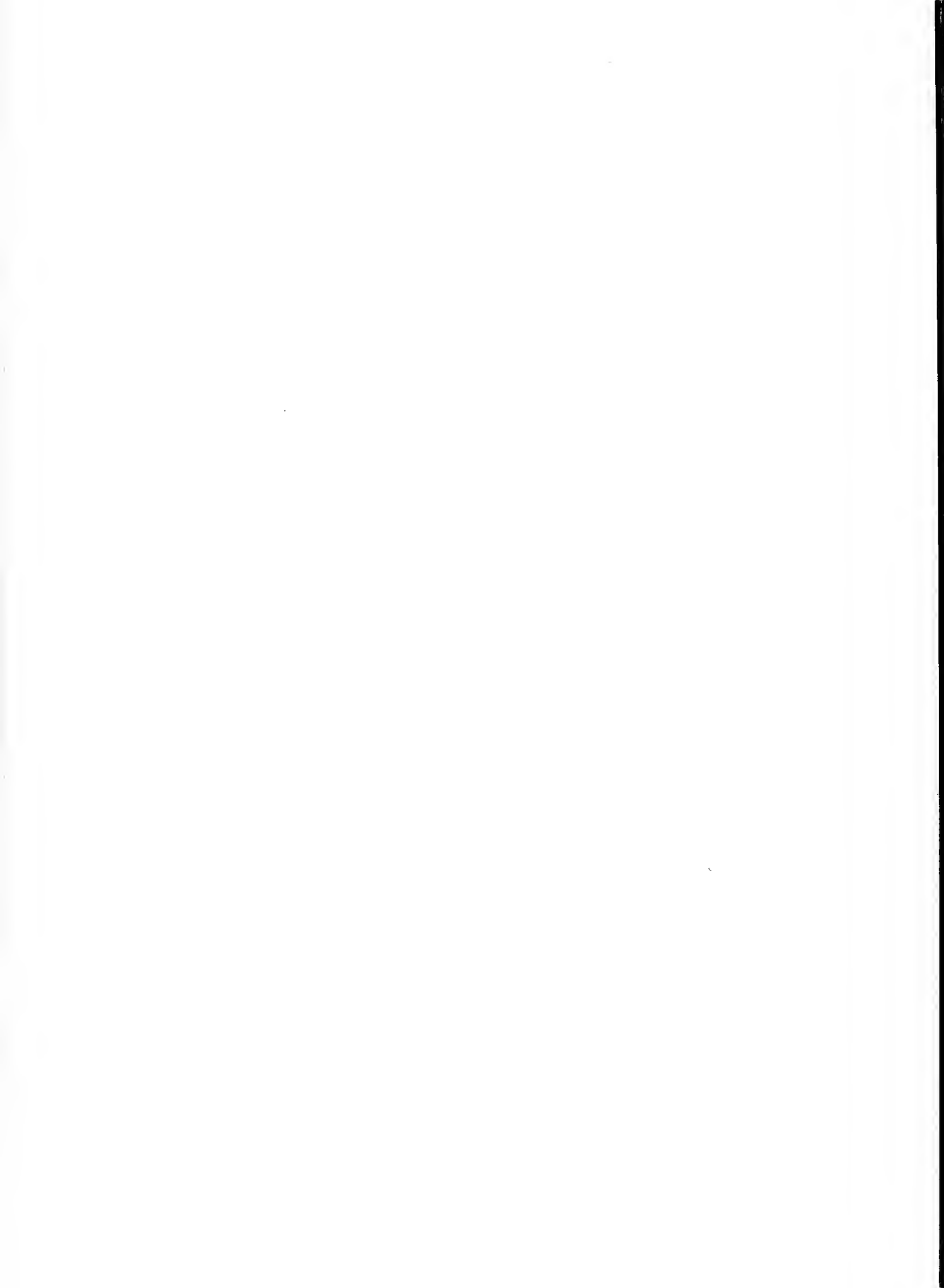
Please print name _____

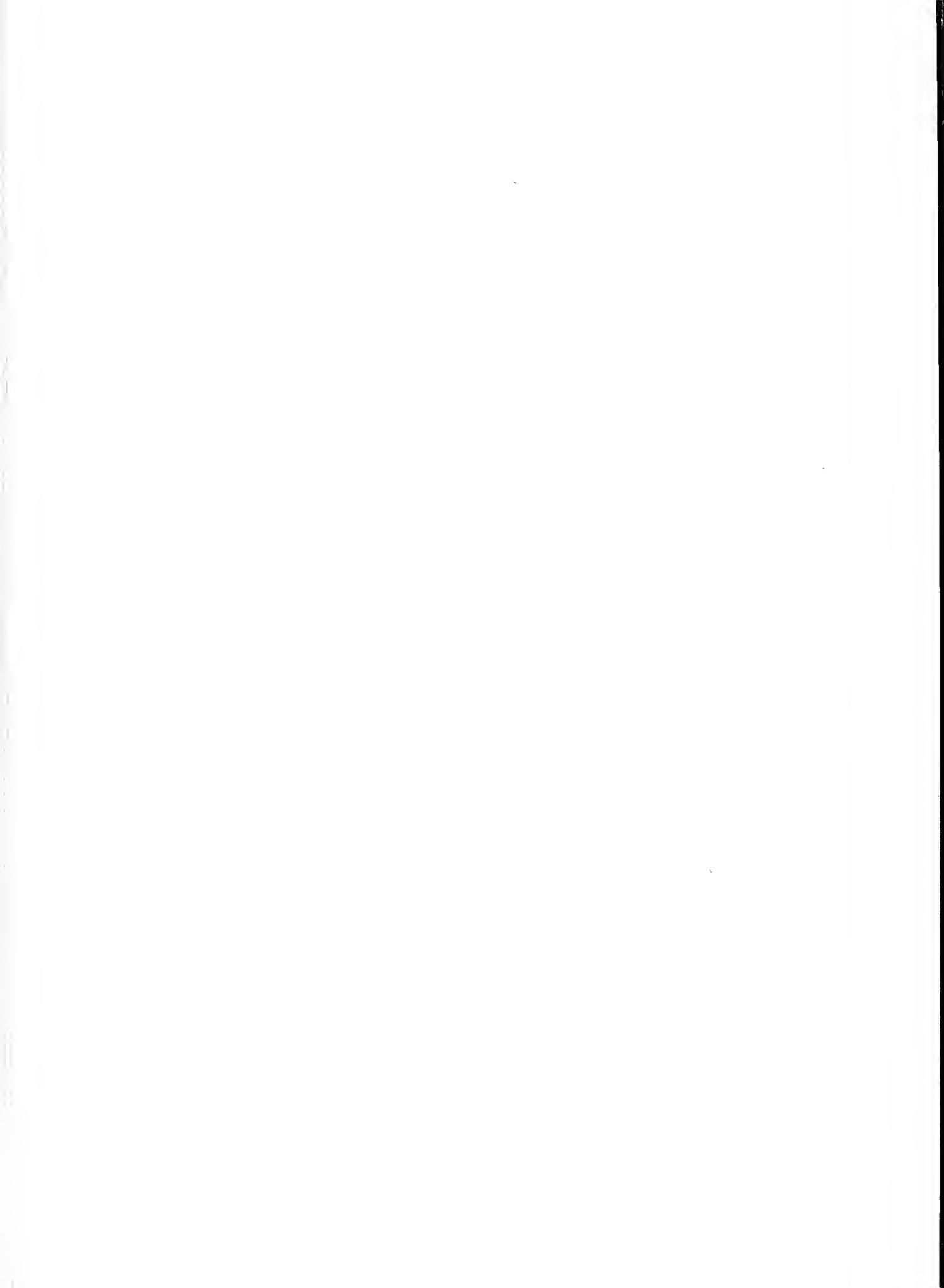
Signed _____ Date _____

Position _____

Institution _____ Address _____

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Special Assistant to the President for Legislative Liaison

Martin L. Hecht, B.S.C.

Assistant to the President (to be named)

Executive Assistant to the President for Affirmative Action

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University College, *Dean*

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Associate Provost

Ronald E. Barr, Ph.D.

Honors Tutorial College, *Director*

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